

Salton Sea

SPECIES CONSERVATION HABITAT PROJECT



Final Environmental Impact Statement/Environmental Impact Report

U.S. Army Corps of Engineers Application No. SPL-2010-00142-LLC
State Clearinghouse No. 2010061062

July 2013



PREPARED FOR

California Natural Resources Agency by the California Department of Water Resources and
Department of Fish and Wildlife

Salton Sea Species Conservation Habitat Project
Final Environmental Impact Statement/Environmental Impact Report

U.S. Army Corps of Engineers
California Natural Resources Agency

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INTRODUCTION

This Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR) for the Salton Sea Species Conservation Habitat Project (SCH Project) consists of the following components:

- The Draft EIS/EIR issued in August 2011, as revised in Section 3 of this Final EIS/EIR.
- Comments on the Draft EIS/EIR.
- Responses to those comments.
- Identification of the U.S. Army Corps of Engineers (Corps) preferred alternative.
- Jurisdictional Delineation Report for the Salton Sea Species Conservation Habitat Project.
- Draft 404(b)(1) Alternatives Analysis for the Salton Sea Species Conservation Habitat Project.
- Mitigation, Monitoring, and Reporting Program.

1.1 PUBLIC REVIEW PROCESS

The public comment period for the Draft EIS began on August 19, 2011 with a Notice of Availability published in the Federal Register 76(161): 51956-51957 (FR Doc No: 2011-21239). The public comment period for the Draft EIR began on August 17, 2011 with a Notice of Availability and Notice of Completion provided to the State Clearinghouse. A Notice of Availability also was filed with Imperial County and published in *The Desert Sun* and *Imperial Valley Press*. The public comment period closed on October 17, 2011.

Fifteen CDs of the Draft EIS/EIR and 15 copies of the Executive Summary were provided to the State Clearinghouse for distribution to state agencies. Approximately 35 hard copies of the Draft EIS/EIR (which each included a CD) were distributed, as were approximately 340 additional CDs. The Notice of Availability was sent to approximately 1,100 additional agencies, tribes, organizations, and individuals.

The Draft EIS/EIR was available for public review at the California Department of Water Resources (DWR) SCH Project website (<http://www.water.ca.gov/saltonsea/>). In addition, copies of the Draft EIS/EIR were available for public review at the U.S. Army Corps of Engineers (Corps) office in Carlsbad and at the California Department of Fish and Wildlife¹ (DFW) office in Bermuda Dunes. It also was available for review at libraries in Brawley, Calipatria, Imperial, El Centro, Salton City, Mecca, and Coachella.

The Corps and the California Natural Resources Agency jointly conducted a series of public hearings to receive comments on the SCH Project Draft EIS/EIR. These were held on September 14, 2011 in both Calipatria and Brawley and on September 15, 2011 in Palm Desert. Both verbal and written comments were accepted during these hearings. Comment letters or electronic comments were received from 32 agencies, organizations, corporations, and individuals.

¹ When the Draft EIS/EIR was issued, the Department of Fish and Wildlife was known as the Department of Fish and Game. Its name was changed to the Department of Fish and Wildlife on January 1, 2013; hence, this is the name used in the Final EIS/EIR.

1.2 NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE STEPS

The Corps will circulate the Final EIS for at least 30 days prior to making a decision on its preferred alternative/least environmentally damaging practicable alternative (LEDPA). Specifically, it will be provided to Federal agencies with jurisdiction by law or special expertise, environmental regulatory agencies, those requesting copies, and those who submitted substantive comments on the Draft EIS. The Corps will file the Final EIS with the U.S. Environmental Protection Agency's (USEPA's) Office of Federal Activities and with the Corps Headquarters, and both the USEPA and Corps Headquarters will publish a notice of availability in the Federal Register indicating the release of the Final EIS. The 30-day time period for public review is measured from the date of publication in the Federal Register. After the 30-day comment period, the Corps will prepare a Record of Decision outlining the Corp's final determination on the LEDPA and the justification for that determination.

1.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE STEPS

To certify the Final EIR, the California Natural Resources Agency must find that it has been completed in compliance with the California Environmental Quality Act (CEQA). Findings of Fact regarding significant impacts of implementing the SCH Project and a Statement of Overriding Considerations for any significant, unavoidable environmental impacts also must be issued. As required by CEQA (Public Resources Code, Division 13, section 21092.5), a proposed written response will be provided to public agencies that commented on the Draft EIS/EIR at least 10 days prior to certifying the Final EIR. If the Natural Resources Agency certifies the EIR and approves the SCH Project, a Notice of Determination will be filed with Imperial County and the State Clearinghouse.

1.4 RESPONSES TO COMMENTS

The Council on Environmental Quality's Regulations for Implementing the National Environmental Policy Act (NEPA) (section 1503.4a) requires that an agency preparing a Final EIS shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses follow:

1. Modify alternatives, including the proposed action.
2. Develop and evaluate alternatives not previously given serious consideration by the agency.
3. Supplement, improve, or modify its analyses.
4. Make factual corrections.
5. Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

All substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous) should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.

If changes in response to comments are minor and are confined to the responses described in paragraphs (a)(4) and (5) of this section, agencies may write them on errata sheets and attach them to the statement instead of rewriting the draft statement. In such cases, only the comments, the responses, and the changes, and not the final statement, need be circulated (section 1502.19). The entire document with a new cover sheet shall be filed as the final statement (Section 1506.9).

If a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group.

CEQA requires lead agencies to respond to significant environmental points raised in the review and consultation process (CEQA Guidelines section 15132). All comments received during the public

comment period are responded to in this Final EIS/EIR. The range of possible responses includes explanation of the alternatives and analyses, making factual corrections, and explaining why comments do not warrant further agency response. When there has been significant public response, CEQA allows the lead agency to summarize or consolidate similar comments, as long as all substantive issues are represented.

1.5 CORPS' PREFERRED ALTERNATIVE/LEDPA

The Council on Environmental Quality's Regulations for Implementing NEPA, section 1505.2(b), require that, in cases where an EIS has been prepared, the Record of Decision must identify all alternatives that were considered, ". . . specifying the alternative or alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA section 101. Ordinarily, this designation means the alternative that causes the least damage to the biological and physical environment; the designation also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. Additionally, the USEPA's Section 404(b)(1) Guidelines require the Corps to issue a permit only for the LEDPA, which is the most practicable alternative that would result in the least damage to aquatic resources and is not contrary to the public interest. Therefore, the LEDPA will be the Corps' preferred alternative. (Refer to Attachment 3, which includes the draft 404(b)(1) Alternatives Analysis, for additional discussion of the reasons for selecting the LEDPA.)

The Project alternatives considered in the Draft EIS/EIR are as follows:

- **Alternative 1 – New River, Gravity Diversion + Cascading Ponds²:** 3,130 acres of ponds constructed on either side of the New River (East New and West New), upstream gravity diversion of river water, and independent and cascading pond units.
- **Alternative 2 – New River, Pumped Diversion:** 2,670 acres of ponds constructed on either side of the New River (East New, West New, and Far West New), pumped river diversion at the SCH ponds, and independent ponds.
- **Alternative 3 – New River, Pumped Diversion + Cascading Ponds:** 3,770 acres of ponds constructed on either side of the New River (East New, West New, and Far West New), pumped diversion of river water, and independent ponds extended to include Far West New and cascading pond units.
- **Alternative 4 – Alamo River, Gravity Diversion + Cascading Pond:** 2,290 acres of ponds constructed on the north side of the Alamo River (Morton Bay), gravity river diversion upstream of the SCH ponds, with independent ponds and a cascading pond unit.
- **Alternative 5 – Alamo River, Pumped Diversion:** 2,080 acres of ponds constructed on the north side of the Alamo River (Morton Bay and Wister Beach), pumped river diversion at the SCH ponds, and independent pond units.
- **Alternative 6 – Alamo River, Pumped Diversion + Cascading Ponds:** 2,940 acres of ponds constructed on the north side of the Alamo River (Morton Bay, Wister Beach), pumped river diversion at the SCH ponds with independent and cascading pond units.

The Corps has identified Alternative 3, New River, Pumped Diversion + Cascading Ponds as its preferred alternative/LEDPA.

1.6 FINAL EIS/EIR ORGANIZATION

The Final EIS/EIR is organized into the following sections:

² All of the alternatives include independent ponds; thus, the name of the alternative reflects those ponds that also include cascading ponds.

- **Section 1, Introduction.** This section introduces the elements comprising the Final EIS/EIR, describes the public review process for the Draft EIS/EIR, describes NEPA and CEQA steps required to finalize and approve the EIS/EIR (including requirements for responding to comments), and describes the Corps' preferred alternative/LEDPA.
- **Section 2, Comments and Responses.** This section includes a list of persons, organizations, and public agencies submitting comments on the Draft EIS/EIR, master responses to multiple comments on similar topics, and a table including the text of the comments received and responses to those comments.
- **Section 3, Edits to the Draft EIS/EIR.** This section presents changes to the Draft EIS/EIR.
- **Section 4, References and Acronyms Used in the Final EIS/EIR.** This includes references that were cited in the responses to comments and acronyms used in the Final EIS/EIR.
- **Attachment 1, Written and Verbal Comments on the Draft EIS/EIR.** This section includes all written comments on the Draft EIS/EIR and transcripts of the public hearings. Each comment has been numbered to correspond to the numbers included in the comment and response table (Section 2.3).
- **Attachment 2, Jurisdictional Delineation Report for the Salton Sea Species Conservation Habitat Project.** This is the Corps-verified report prepared to identify and delineate jurisdictional wetlands and waterways located at the Alternative 3 site that are subject to the regulatory jurisdiction of the Corps pursuant to section 404 of the Clean Water Act.
- **Attachment 3, Draft 404(b)(1) Alternatives Analysis for the Salton Sea Species Conservation Habitat Project.** This is the alternatives analysis conducted to comply with the Clean Water Act section 404(b)(1) guidelines.
- **Attachment 4, Mitigation, Monitoring, and Reporting Program.** The Mitigation, Monitoring, and Reporting Program has been prepared to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during Project construction and operations.
- **Attachment 5, Draft EIS/EIR Appendices D and G.** The content of these files is the same as in the Draft EIS/EIR, but they have been included due to issues affecting the readability of the files included as part of the Draft EIS/EIR.

RESPONSES TO COMMENTS

2.1 LIST OF THOSE SUBMITTING COMMENTS ON THE DRAFT EIS/EIR

The following is a list of those Federal, state, and local agencies; organizations and corporations, and individuals who provided written or verbal comments in response to the Draft EIS/EIR.

Federal Agencies

- Federal Emergency Management Agency (FEMA)
- International Boundary and Water Commission (IBWC)
- Bureau of Reclamation (BOR)
- Office of Environmental Policy and Compliance (OECP)
- U.S. Environmental Protection Agency (EPA)

State Agencies

- California Native American Heritage Commission (NAHC)
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR)
- California Department of Toxic Substances Control (DTSC)
- California Regional Water Quality Control Board (RWQCB)
- California State Lands Commission (CSLC)

Local Agencies

- Imperial County Board of Supervisors (ICBOS)
- Coachella Valley Water District (CVWD)
- Imperial Irrigation District (IID)
- San Diego County Water Authority (SDCWA)
- Imperial County Air Pollution Control District (ICAPCD)
- Salton Sea Authority (SSA)

Organizations and Corporations

- Solar Power & Water
- Imperial County Farm Bureau
- CalEnergy
- Pacific Institute
- San Diego Audubon Society

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- Defenders of Wildlife
- Center for Biological Diversity

Individuals¹

- Paul Wertlake, MD
- Steve Boland
- M. Ryan
- Ruth Niswander
- James Eric Freedner
- Chris Cockcroft
- Jack M. Feliz
- Jeff Geraci
- Patrick J. Maloney
- Don Hedgepeth
- Mike Morgan
- Dave Van Cleef
- Bruce Wilcox
- Chris Schoneman
- Frank Bailey
- Daniel Santian
- Andy Horn
- Larry Grogan
- Ted Martin
- Dale Grayson
- Chris Bogart
- John Cariotis
- Carrie Berman
- Leo Borunda
- Mohammed Wasif
- Paul Norman
- Linda Beal
- Kathy Cronemeier
- Margit Chiraco Reshay

¹ Some of these individuals represent agencies and provided verbal comments at the public hearings.

- Amari Cariotis
- Candace Weber
- Peter Nelson

2.2 MASTER RESPONSES TO COMMENTS

The following master responses are provided to address similar comments on a given topic.

2.2.1 Master Response 1, Selected Fish Species

A number of commenters raised questions about the species of fish that are being considered for use in the SCH ponds, either expressing concern about the potential for adverse impacts on desert pupfish or suggesting the use of other fish, such as striped mullet. Other commenters asked whether other fish species were being considered.

Fish species for introduction into the SCH ponds were selected through evaluation of many species that are readily available (DFG 2011). Initially, 35 species were identified and evaluated for the following criteria:

1. Tolerance of low dissolved oxygen.
2. Tolerance of high and low temperatures likely to be present in the SCH ponds (for all life stages).
3. Food habitats (feed on lower trophic levels such as detritus, algae, and invertebrates).
4. Reproductive requirements and limiting factors (habitat structure, water quality, etc.).
5. Salinity tolerance of all life stages.
6. Potential effects on desert pupfish (competition for food or habitat, predation, etc.).

Based on these criteria, the five species in the Draft EIS/EIR (Table 3.4-3) were selected to provide some diversity and to test which would have the best survival and productivity under variable conditions. Monitoring and adaptive management will be needed to evaluate the fish used and possibly recommend addition of other species if needed. Information on species to evaluate was obtained from published literature and fish experts in DFW, as well as from the consultant team that prepared the Draft EIS/EIR.

A small amount of piscivory has been documented for both species of tilapia and the sailfin molly (Martin and Saiki 2009; Caskey et al. 2007), some of which may be related to lack of other food sources at the Salton Sea in recent years. The SCH ponds are expected to provide adequate forage for all fish species so that piscivory would be negligible.

The non-native tilapia and sailfin molly are all currently present at the Salton Sea and have adapted to conditions there. The desert pupfish also co-exists with these species. Striped mullet were considered, but their upper thermal tolerance (24°C) is not high enough, and their lower dissolved oxygen threshold of 5 ppm is not low enough to make them good candidates for the SCH ponds. In addition, most of their population's biomass would be tied up in adult fish, which are too large for birds to prey upon.

2.2.2 Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration

A number of comments addressed the need for restoration of the entire Salton Sea and possible ways of achieving this. Another comment focused on the relationship of the SCH Project to Early Start Habitat, as defined in the Salton Sea Ecosystem Restoration Program Programmatic EIR (PEIR) (DWR and DFG 2007).

A response to comments regarding restoration of the entire Salton Sea is not required under CEQA or NEPA because the comments do not raise a significant environmental issue (CEQA Guidelines section

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15088; 40 CFR section 1503.4). Such comments will be included as part of the record and made available to decision makers prior to a final decision on the proposed project. Nonetheless, in an effort to provide as much information as possible, the Lead Agencies respond to such comments below.

The SCH Project's goals and objectives/purpose and need are described in Section 1.3. As discussed on page 1-4, lines 11-14, the SCH Project's CEQA goals are two-fold: (1) develop a range of aquatic habitats that will support fish and wildlife species dependent on the Salton Sea; and (2) develop and refine information needed to successfully manage the SCH Project habitat through an adaptive management process.

More specifically, the SCH Project's purpose under Goal 1 is to provide in-kind replacement for near-term habitat losses. The Project's target species are those piscivorous bird species that use the Salton Sea and that are dependent on shallow saline habitat for essential habitat requirements and the viability of a significant portion of their population (page 1-4, lines 18-21). Therefore, the SCH Project is intended to replace only a portion of the habitat that eventually will be lost as the salinity level increases and the Sea recedes. It is not intended to restore the entire Salton Sea.

The SCH Project's second goal (page 1-5, lines 28-36) is to serve as a proof of concept for the restoration of shallow water habitat that supports fish and wildlife currently dependent upon the Salton Sea. The information obtained would be used to measure Project effectiveness, to refine operations and management of the ponds, to reduce uncertainties about key issues, and to inform subsequent stages of habitat restoration at the Salton Sea. Although the SCH Project is not intended to restore the entire Salton Sea, information obtained through its monitoring and adaptive management program could be used to inform future restoration efforts. The relationship of the SCH Project to the Salton Sea Ecosystem Restoration Program, which is intended to restore the entire Salton Sea, is discussed in Section 1.6.1. This section correctly notes that the SCH Project is *consistent with* the description of Early Start Habitat identified in the PEIR (emphasis added) (page 1-8, lines 27-28). It is not Early Start Habitat per se, which is a part of the Salton Sea Ecosystem Restoration Program. As noted on page 1-8, lines 16-18, the California Legislature has not taken any action to approve or provide funding for any alternative for restoration of the Salton Sea ecosystem.

2.2.3 Master Response 3, Project Scope

Certain comments indicated that the Project goals were not clearly defined in the context of an unstable baseline and historic condition, as well as the future conditions at the Salton Sea, and also addressed the need to focus on species other than piscivorous birds.

The SCH Project's goals and objectives/purpose and need are described in Section 1.3. The goals and accompanying objectives are clearly defined and take into consideration the historic value of the Salton Sea, as well as likely future conditions, which are described in Section 1.2, Background. The SCH Project is not intended to replicate existing or historic conditions at the Salton Sea, however, which would exceed the requirements established by California Fish and Game Code section 2932(b). As discussed on page 1-4, lines 8-14, under Fish and Game Code section 2932(b), the California Legislature appropriated funds for the purpose of implementing conservation measures necessary to protect the fish and wildlife species dependent on the Salton Sea, including adaptive management measures. Therefore, under CEQA the SCH Project's goals are two-fold: (1) develop a range of aquatic habitats that will support fish and wildlife species dependent on the Salton Sea; and (2) develop and refine information needed to successfully manage the SCH Project habitat through an adaptive management process (page 1-4, lines 11-12).

The following assumptions were used in determining which fish and wildlife species are dependent on the Salton Sea:

- Riparian habitat is located primarily along the three rivers draining into the Sea and species using that habitat are not dependent on the Sea.

- Freshwater marshes are primarily manmade in upland areas, and species that use these habitats are not dependent on the Sea.
- Fish in the drains (other than desert pupfish) are not dependent on the Sea.
- Only species of fish and birds that used the Sea in 2004, as identified in the Salton Sea Ecosystem Restoration Program PEIR, are considered for dependence on the Sea. (2004 was the year that the above-referenced legislation was passed.)
- Invertebrate species that are currently present or were present in the marine phase are considered important for the fish and birds dependent on the Sea.
- By definition, aquatic species are dependent on the Sea.

As discussed on page 1-4, lines 5-8, the most serious and immediate threat to the Salton Sea ecosystem is the loss of fishery resources that support piscivorous birds. The birds that feed on invertebrates have more options and resources, because the invertebrate fauna has a wider range of salinity tolerances. Piscivorous birds, on the other hand, are at risk of decline. Therefore, the SCH Project focuses on the limited resources available for piscivorous birds and aquatic species. The SCH Project already includes a broad range of salinities and habitat features, which would incidentally benefit other species, such as shorebirds. Expanding the range of salinities beyond what is proposed or increasing the list of targeted species would exceed the legislative mandate and is beyond the scope of this Project.

2.2.4 Master Response 4, Project Funding

Multiple commenters questioned the source of funding, how much money was currently available, what additional funds might be obtained, whether the alternatives could be scaled back if full funding were not available, how this would affect the impact analysis in the EIS/EIR, and what would happen if funding disappeared. Another commenter compared the ongoing funding obligation for the SCH Project to that of the Quantification Settlement Agreement (QSA), stating that the QSA was deemed unconstitutional based on the State's ongoing funding obligations. It also was requested that the design reflect that the Project would be part of a series of likely future restoration projects and that sufficient monitoring and data collection be funded to inform future proposals.

A response to comments regarding Project funding is not required under CEQA or NEPA because the comments do not raise a significant environmental issue (CEQA Guidelines section 15088; 40 CFR section 1503.4). Such comments will be included as part of the record and made available to decision makers prior to a final decision on the proposed project. Nonetheless, in an effort to provide as much information as possible, the Lead Agencies respond to such comments below.

As part of the QSA, the state Legislature passed Fish and Game Code Section 2930 et seq., which established the Salton Sea Restoration Fund (SSRF). The SSRF is administered by the director of the DFW. The SSRF is to be used for (1) environmental and engineering studies related to the restoration of the Salton Sea and protection of the fish and wildlife dependent on the sea; (2) implementation of conservation measures necessary to protect the fish and wildlife species dependent on the sea, including adaptive management measures; (3) implementation of the preferred Salton Sea restoration alternative; and (4) administrative, technical, and public outreach costs related to the development and the selection of the preferred Salton Sea restoration alternative (Fish and Game Code section 2932). The SCH Project is one of the projects to be funded by the SSRF.

There are currently two primary sources of funds for the SSRF: (1) Proposition 84 funds relating to the Salton Sea and (2) funds from water agencies involved in the QSA (Coachella Valley Water District [CVWD], Imperial Irrigation District [IID], and San Diego County Water Authority [SDCWA]). Funds from Proposition 84 are designated for construction of the SCH Project. Funds from the water agencies are designated for operations and maintenance of the SCH Project, including the monitoring and adaptive

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management process. Table 2-1 outlines the funds that have been allocated, expended, and encumbered, and those that are remaining.

Table 2-1 Salton Sea Restoration Program Funding History Totals

Source	Total Allocation	Total Expended	Total Encumbered	Funds Remaining
Salton Sea Restoration Fund ¹	30,000,000	6,243,969	11,282	23,744,749
Proposition 84	45,355,000	5,610,964	8,404,589	31,339,447
Proposition 50 ²	22,000,000	20,163,747	423,184	1,413,069
Total	\$97,355,000	\$32,018,680	\$8,839,055	\$56,497,265

1. Salton Sea Restoration Fund contributions from local water agencies.

2. All Proposition 50 funds received from DWR were reimbursements from the Wildlife Conservation Board through two interagency agreements: \$20 million in 2003 and \$2 million in 2012.

All funds in the SSRF must be appropriated by the state Legislature. The California Natural Resources Agency will be asking for the remainder of the funds for SCH Project construction, operations, and maintenance, but the appropriations process is a rigorous one, and the results are not guaranteed.

The appropriated funds would be used to build as much habitat as feasible, although it is possible that the entire acreage evaluated in the Draft EIS/EIR may not be able to be constructed; the cost estimates are being refined as the design process continues. (Refer to Master Response 5, Project Costs.) If additional funds became available through another source, these potentially could be used to augment the funds discussed above and expand the amount of habitat that could be constructed. In no case would the amount of habitat constructed exceed that analyzed in the Draft EIS/EIR without additional environmental review. If less habitat was constructed than analyzed in the Draft EIS/EIR, the beneficial and adverse impacts would be lessened accordingly.

As discussed on page 2-10, lines 28-35, the proof-of-concept period would last for approximately 10 years after completion of construction (until 2025). After the proof-of-concept period, the Project would be operated until the end of the 75-year period covered by the QSA (2078) or until funding were no longer available. Funds would need to be appropriated annually by the Legislature, as they are for other State-funded facilities, such as beaches and parks. Thus, the SCH Project is not an infinite project that would place ongoing obligations on the State. Note also that on December 7, 2011, the Court of Appeal issued its ruling that reversed the trial court ruling and remanded the cases to the trial court for further proceedings. On June 4, 2013, the trial court issued its order upholding the validation of the QSA and related agreements. The QSA remains valid, pending other appeals or court rulings, if any.

2.2.5 Master Response 5, Project Costs

A number of commenters asked that information on Project costs for construction, operations, and maintenance be provided.

A response to comments regarding Project costs is not required under CEQA or NEPA because the comments do not raise a significant environmental issue (CEQA Guidelines section 15088; 40 CFR section 1503.4). Such comments will be included as part of the record and made available to decision makers prior to a final decision on the proposed project. Nonetheless, in an effort to provide as much information as possible, the Lead Agencies respond to such comments below.

Cost information was not included in the Draft EIS/EIR because it is not required by either CEQA or NEPA. Preliminary cost information was developed as part of the 35 percent design, but is subject to change once more detailed information is available regarding site-specific conditions, including topography and geotechnical conditions. If the SCH Project is approved by the lead agencies, the project

design for the selected alternative will become more detailed based on additional engineering, hydrology, soils, and permitting requirements. Through this process, the design would gain additional specificity and costs can be fine-tuned. Operational costs also would be refined. For example, costs for power would be determined through negotiations with IID, which have not yet been conducted. If needed, the design of the final project would be modified, so that Project cost matches the available budget (refer to Master Response 4, Project Funding). The Project would not be larger than analyzed in the Draft EIS/EIR; therefore, impacts would not increase.

As discussed on page 1-15, lines 4-11, cost is a factor considered by the Corps in determining whether an alternative is practicable. This is included in the analysis performed to comply with the U.S. Environmental Protection Agency section 404(b)(1) Guidelines, which require the Corps to issue a permit only for the “least environmentally damaging practicable alternative” (LEDPA). Information on costs is considered, as appropriate, in the 404(b)(1) analysis (Attachment 3).

2.2.6 Master Response 6, Water Rights

Some commenters expressed concerns about whether a reliable water supply can be found for the SCH Project’s duration. As discussed in the Draft EIS/EIR, the proposed water sources for the Project include either the brackish New or Alamo rivers (depending on the alternative) and the Salton Sea (Section 2.4.1.7, pages 2-15 through 2-16). IID asserts a right to return flows into the New and Alamo rivers, but the amount is not quantified. IID has stated no objection to diverting return flow water for the SCH Project and has indicated it would cooperate with the Natural Resources Agency on its need for a reliable water supply. The Metropolitan Water District of Southern California (Metropolitan) filed applications in 1997 seeking a water right on both rivers but has not pursued projects that would establish a need for a permit for either water source; nor has the State Water Resources Control Board acted on the applications (page 2-4, lines 16-19).

The Natural Resources Agency has not sought an application with the State Water Resources Control Board for a water right on either river, primarily to avoid potential protracted disputes with current applicants over priority to the water supply, which could inevitably delay the Project. Rather, the Natural Resources Agency would likely negotiate with Metropolitan and, if necessary, IID to reach a mutually acceptable agreement that would ensure an adequate water supply for the duration of the SCH Project. The Natural Resources Agency is currently unaware of other potential impediments to obtaining an adequate water supply for the Project. Metropolitan has not indicated that it would object to the Natural Resources Agency’s seeking a water supply from either river in discussions to date.

2.2.7 Master Response 7, Operations and Adaptive Management

Several commenters suggested parameters to be tested during Project operations, including water quality parameters, chemical constituents, and residence times, and one commenter requested that the EIS/EIR review a broad range of construction techniques, management strategies, habitat types, salinities, and target species. Several comments suggested including at least some freshwater cells in the ponds. Another comment suggested that an adaptive management approach be adopted to allow for some flexibility should the proposed remedies regarding selenium risk fail to have the desired effects. This commenter also suggested including a discussion of the utility of providing mitigation wetlands to offset any documented Project effects.

The SCH ponds are intended to be operated in a manner that would both provide a partial in-kind replacement for some habitat losses and answer key questions regarding shallow water habitat restoration (Appendix D, Project Operations). Operations would have to balance habitat requirements necessary to achieve Project objectives against competing constraints such as environmental limitations, compatibility with adjacent land uses and habitat values, and consistency with the IID Habitat Conservation Plan / Natural Communities Conservation Plan. Decisions necessary to strike this balance and meet the objectives would be made within an adaptive management framework.

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Because uncertainties remain about habitat function and biological responses at the ponds, the SCH Project is being designed with a range of operational scenarios (Appendix D, Project Operations) to evaluate the effectiveness of different management actions. Operation of these experimental ponds would attempt to meet Project objectives given certain constraints of physical conditions, water quality, and climate (i.e., temperature, wind). SCH Project operations would be constrained by the physical characteristics of the ponds (e.g., depth, area, and bottom profile). Certain conditions could be modified as needed, within some range of conditions, by adjusting salinity, volume, and residence time of the water within the ponds; fish species stocked in the ponds; and physical cover elements. The range identified for operational variables was designed to “bookend” the analysis and provide information to decision makers.

Depending on the specific alternative and pond design selected, the habitat would be composed of a few to several individual ponds. This design would allow the operators to try different combinations of storage, salinity, and residence times to investigate how these factors could be adjusted to provide the best conditions for fish and birds. Different operational scenarios would be tested during the proof-of-concept phase, the first 10 years of project operation (to approximately 2025). After the proof-of-concept phase, pond variables would be managed to produce the best habitat for fish and wildlife dependent on the Salton Sea.

Several commenters recommended the following adjustments to the operating ranges for salinity and residence time:

- Include some freshwater ponds – This was suggested to allow research into selenium pathways and wildlife response and to improve understanding of a wider range of restoration techniques for future Salton Sea restoration. The proposed initial operating range of salinity would typically be 20-40 ppt. Freshwater conditions were not included in the initial operating scenarios in order to minimize potential negative effects (e.g., mosquito vectors, selenium loading, emergent vegetation that facilitates selenium bioaccumulation, and freshwater fish that could prey on pupfish). The adaptive management framework of the SCH Project does support testing different experimental operating scenarios, including varying salinity beyond this range, although those effects have not been fully evaluated in this document. Future management could consider freshwater cells, but additional environmental analysis would be required at that time. The monitoring program would include selenium monitoring to allow detection of adverse responses, and operations could be adjusted accordingly.
- Allow longer residence time to reduce water demands – The initial operating range of residence time of water in the ponds is 2-32 weeks. This bounds the likely operating conditions, acknowledges variable environmental conditions that can affect water quality, and provides flexibility to balance pumping costs. Operational decisions would not be rigidly tied to a set number of days of residence time; rather, they would be informed and guided by monitoring data in order to meet habitat and water quality goals.

Key indicators of physical, chemical, and biological attributes of that habitat would be monitored to determine the effects of different operational scenarios, and any adjustments would be implemented as needed in accordance with the SCH monitoring and adaptive management framework (Appendix E).

As discussed in Appendix E, page E-4, lines 20-29, key monitoring elements would include the following:

- Physical Habitat – flow rate, depth, wetted area, islands, snags, submerged vegetation, and other habitat elements.
- Water Quality – salinity, temperature, dissolved oxygen, nutrients.
- Aquatic Biota – algae, plankton, invertebrates, fish community (species, distribution, abundance), desert pupfish.

- Birds – species, abundance and distribution, use of habitat features, breeding and nesting, sick or dead birds.
- Contaminants – selenium concentrations in water, sediment, bird eggs, and other biota (invertebrates, fish).

Some parameters would be amenable to operational adjustment within the physical bounds of the constructed ponds (i.e., water depth; flow rate, residence time, and water source blending for salinity and selenium management), while other parameters (water temperature, dissolved oxygen) would be driven more by uncontrollable variables (i.e., air temperature, wind mixing). Because the SCH Project has not reached final design or construction, this document does not include the detailed protocols and site-specific sampling design necessary for actual implementation. A more detailed monitoring plan and decision-making process will be developed should the SCH Project be constructed.

2.2.8 Master Response 8, Compatibility with Geothermal Development

Comments related to geothermal development focused on avoidance of the Known Geothermal Resource Area (KGRA), the need for the SCH Project to be compatible with and not restrict access to future geothermal development, and the need for continued coordination between the SCH Project team and geothermal developers. One comment requested that the EIS/EIR acknowledge that the future or current presence of sensitive species in the SCH areas would not preclude geothermal development activity. Another indicated a belief that the SCH Project previously had committed to providing causeways that could support geothermal equipment and would allow access to geothermal facilities, and another indicated that the State might seek funds for the SCH Project from geothermal developers.

The importance of geothermal resources in the Project area is recognized in multiple sections of the Draft EIS/EIR, including, but not limited to, Section 2.4.1.25, Project Compatibility with other Potential Future Land Uses; Section 3.8, Geology, Soils, and Minerals; and Section 3.13, Land Use. The relationship of the SCH alternative sites to the KGRA is shown on Figure 3.13-3, Existing Land Uses near the New and Alamo Rivers. As discussed on page 7-3, lines 37-40, the presence of geothermal resources was one of the factors used in eliminating sites near the Alamo River in selecting the State's preferred alternative ("The Alamo River area also is in a Known Geothermal Resource Area and known geothermal resources diminish west of the New River. Although the SCH Project would not preclude geothermal development, the New River area is considered preferable because the potential for conflicts with geothermal development companies would be minimized.")

Because of the desire of the SCH agencies to minimize conflicts with the development of this resource, five meetings were held with geothermal development companies and/or IID in order to address potential conflicts during development of the Draft EIS/EIR (refer to Table 6-2). Based on these meetings, the project description (Section 2.4.1.25) explicitly states that the SCH Project would be designed and operated to be compatible with other geothermal projects in the area and notes that the SCH ponds and berms could be adapted, as needed, to accommodate future geothermal facilities such as well pads and access roads. Additional specificity cannot be provided at this time given the lack of approved plans for future development; however, a general description of the types of facilities expected to be constructed is included in Section 3.13.3.5, Future Land Uses in the Study Area, on page 3.13-9, lines 21-33. Consideration also would be given to minimizing the potential for conflict with future geothermal development as the design proceeds. This would be accomplished through ongoing coordination with IID and geothermal development companies, as well as specific provisions established through the lease agreement with IID for use of its land.

Certain comments raise issues that are outside the scope of the Draft EIS/EIR. Page 2-22, lines 25-31 correctly notes that modifications to the SCH Project to accommodate the potential future development would be the responsibility of the geothermal developers, and the impacts of such development are outside the scope of this EIS/EIR. It is not the responsibility of the SCH Project to create berms and other

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facilities that are adequate to support future development that is part of another project and beyond what is required for the SCH Project, nor could State funds designated for Salton Sea restoration be used for such a purpose (refer also to Master Response 4, Project Funding for additional detail regarding funding sources; note that funds are not being sought from private entities). Additionally, the Draft EIS/EIR focuses on impacts specific to the construction and operation of the SCH Project; it is not the role of this document to provide assurances that the presence of special-status species would not preclude future geothermal activity. Rather, this is more appropriately handled through a process such as IID's Habitat Conservation Plan/Natural Communities Conservation Plan, which is specifically intended to address the impacts of covered activities on such species.

2.3 OTHER COMMENTS AND RESPONSES

Table 2-2, Comments and Responses includes the text of all comments received on the Draft EIS/EIR. The comments were reproduced as written and may contain grammatical and spelling errors. Responses are provided for each comment raising significant environmental issues. A response to comments that do not raise a significant environmental issue is not required under CEQA or NEPA (CEQA Guidelines section 15088; 40 CFR section 1503.4). Such comments will be included as part of the record and made available to decision makers prior to a final decision on the proposed project. Nonetheless, responses have been provided to all comments in the interest of fully addressing public concerns and providing as much information as possible. The section, page, and line numbers referenced in the responses to comments are from the Draft EIS/EIR.

Table 2-2 Comments on the Draft EIS/EIR and Responses

Name	Com. No.	Comment	Response/Issues
Federal Agencies			
FEMA	FEMA-1	<p>Please review the current effective Flood Insurance Rate Maps (FIRMs) for the County of Imperial (Community Number 060065), Maps revised September 26, 2008. Please note that the County of Imperial, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol.44 Code of Federal Regulations (44 CFR), Sections 59 through 65.</p> <p>A summary of these NFIP floodplain management building requirements are as follows:</p> <p>All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.</p> <p>If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any development must not increase base flood elevation levels. The term development means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. A hydrologic and hydraulic analysis must be performed prior to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.</p> <p>Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/fbrms.shtml.</p>	<p>The Flood Insurance Rate Map for the Project area was reviewed, and it is discussed on page 3.11-13, lines 6-12. The Zone A delineation does not list flood elevations, and therefore, the depth of flooding cannot be addressed. One definition of Zone A is shallow (less than 1 foot) flooding. The potential for an office trailer to be placed on the Project site is addressed on page 3.11-34. Placement of this trailer would have to conform to the Imperial County floodplain ordinance, including elevation of the floor of the trailer, tie-downs, and flood-proofing of utilities. Other Project features such as berms, pipelines, and pumping facilities are not habitable structures and, therefore, are not subject to floodplain regulations for finished floor. The riverine pumping facilities would be elevated on a platform above the river bank and therefore would be more than 1 foot above native ground. No text revisions are required.</p>
FEMA	FEMA-2	<p>Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The Imperial County floodplain manager can be reached by calling Brian Donley, Building Official, at (760) 482-4311.</p>	<p>Prior to construction, Imperial County would be contacted to incorporate the County floodplain regulations for placement of the office trailer on the Project site. No text revisions are required</p>

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Name	Com. No.	Comment	Response/Issues
Gilbert Anaya (International Boundary & Water Commission)	IBWC-1	The United States Section, International Boundary and Water Commission (USIBWC) has reviewed the draft EIS/EIR regarding the restoration of shallow water habitat through creation of shallow ponds using a blend of New or Alamo River water and Salton Sea water and does not have any comments or concerns at this time. The proposed action is not anticipated to have any impacts to projects or resources of the USIBWC.	The lack of comments by the United States International Boundary Commission is noted.
Bureau of Reclamation	BOR-1	Reclamation is supportive of the Project and appreciates opportunity to participate as a cooperating agency in the development of the EIS/EIR	Reclamation's support of the SCH Project is noted.
Bureau of Reclamation	BOR-2	Section 3.13-11, lines 27-35, discuss potential uses of land that will become exposed at the Salton Sea in the future. Please clarify that uses of Reclamation land would be designated in accordance with the Agency's authorities, regulations, and policies.	This text has been clarified to indicate that in the case of Federal lands, the proposed uses would be consistent with the management authority of the Federal agency that is assigned management responsibility of the parcel.
Office of Environmental Policy & Compliance	OEPC-1	Throughout the document the Programmatic Environmental Impact Report (DWR and DFG 2007) is cited as the source of information for findings, data, or statements of fact. Citing the PEIS rather than the original sources makes it much more difficult for the reader to evaluate the information. We suggest that the final EIS reference the original source of information where possible.	The Final EIS/EIR does not replicate the Draft EIS/EIR text. It only includes changes required to clarify or correct text. The Salton Sea Ecosystem Restoration Program Programmatic Environmental Impact Report (PEIR) was the source of information on a number of topics and is correctly cited; therefore, no text revisions are required.
Office of Environmental Policy & Compliance	OEPC-2	The document establishes a framework for developing a salinity gradient system of shallow impoundments (Sections 1.3 and 1.6.1) similar to those developed by the U.S. Bureau of Reclamation and U.S. Geological Survey. There are differences; this document describes attempts to develop a system capable of supporting an array fish to provide forage for fish eating birds, but in most respects the systems are similar in form and function.	The concept of impoundments is similar, but there are key differences in design (e.g., greater maximum depth in SCH ponds) and likely subsequent function. No text revisions are required.
Office of Environmental Policy & Compliance	OEPC-3	The premise set forth in some sections of this document is also articulated in and supported by Miles et al. (2009), which predates Sickman et al. 2011, and establishes the rationale for mixing and blending sources of water, establishes a robust dataset for the ecological risk assessment, and articulates the role of salinity management in reducing selenium risk and vector control. We suggest that the final EIS reference Miles et al. (2009) in section 1.6.1, and describe the theory underlying the project. The theory is documented in Miles et al. (2009) pages 3 & 4.	The Draft EIS/EIR references Miles et al. 2009 extensively (e.g., Sections 1, 3.4, and 3.11), in addition to Sickman et al. 2011 (e.g., Sections 3.4, 3.10, and 3.11), which reviewed the literature for this project-specific analysis. No additional discussion is required.
Office of Environmental Policy & Compliance	OEPC-4	SECTION 3.4 The document states that the principal reason for SCH development is to produce fish to support a bird community that relies on fish as a foraging base; however, the document contains minimal discussion of the maintenance of a self-sustaining population of fish. Data on the effects of selenium (Anderson, 2009) and evidence from the Reclamation/USGS ponds that desert pupfish will prosper	Sufficient information is included in the Draft EIS/EIR to allow for a thorough assessment of the impacts of the SCH Project, including the effects of selenium. As required by NEPA (40 CFR section 1502.2) and CEQA (CEQA Guidelines sections 15143 and 15147), EISs and EIRs are intended to be concise documents that focus primarily on the significant impacts of the Project, rather than on the factors that contribute to the maintenance of a self-sustaining

Name	Com. No.	Comment	Response/Issues
		<p>at certain ponds and environmental conditions are not addressed. Additional analysis is needed to describe how desert pupfish will coexist with the many non-native fish species anticipated for use in SCH, and of how the primary project fish, tilapia, will deal with the potential reproductive effects of selenium at a higher rate of exposure than in the Salton Sea or the rivers and drains. We suggest that the authors review the data and information presented in the following references for possible inclusion in the final EIS.</p> <p><u>References on population-level effects of selenium</u></p> <ul style="list-style-type: none"> ▪ Anderson, TW. 2009. Avian use and selenium risks evaluated at a constructed saline habitat complex at the Salton Sea, California. MS Thesis, San Diego State University. ▪ Hamilton, SJ. 2004. Review of selenium toxicity in the aquatic food chain. Sci. Tot. Env. 326: 1–31. 4ug/g whole body - impaired growth and survival ▪ Cumbie, PM, SL Van Horn, 1978. Selenium accumulation associated with fish mortality and reproductive failure. Proceedings of Annual Conference of Southeastern Assoc. Fish Wildlife Agencies; 32 pp.612–624. ▪ Hamilton, SJ, KJ Buhl, FA Bullard, SF McDonald. 1996. Evaluation of toxicity to larval razorback sucker of selenium-laden food organisms from Ouray NWR on the Green River, Utah. National Biological Service, Yankton, SD, Final Report to the Recovery Implementation Program for the Endangered Fishes of the Colorado River Basin, Denver. ▪ Hamilton, SJ, KJ Buhl, FA Bullard, EE Little. 2000. Chronic toxicity and hazard assessment of an inorganic mixture simulating irrigation drain water to razorback sucker and bony tail. Environ Toxicol. 15:48–64. ▪ Hamilton, SJ, RT Muth, B Waddell, TW May. 2000. Hazard assessment of selenium and other trace elements in wild larval razorback sucker from the Green River, Utah. Ecotoxicol. Environ. Safety 45(2):132-147. ▪ Harris, T. 1986. The selenium question. Defenders. March–April 1986:10–20. ▪ Lemly, AD. 1997. A teratogenic deformity index for evaluating impacts of selenium on fish populations. Ecotoxicol. Environ. Safety 37:259–266. frequency of malformations in centrarchids – 10% freq at 30 ug/g whole fish tissue. ▪ Lemly, AD, HM Ohlendorf. 2002. Regulatory implications of using constructed wetlands to treat selenium-laden wastewater. Ecotoxicol. Environ. Safety. 52:46–56. ▪ Saiki, MK, RS Ogle. 1995. Evidence of impaired reproduction by western mosquito fish inhabiting seleniferous agricultural drain water. Trans. Am. 	<p>population of fish. Nevertheless, the Draft EIS/EIR contains adequate information on the process that would be used to monitor the ponds and modify conditions as needed. As discussed on page 2-10, lines 28-32, the experimental SCH ponds are being designed to be operated as a proof-of-concept project. Production of a fish population would be evaluated through monitoring and adaptive management because changes in environmental variables that affect fish production are not easily predictable (refer to Section 2.4.4 and Appendix E for additional details regarding the monitoring and adaptive management aspects of the Project).</p> <p>Concentrations of selenium in fish expected in the ponds were modeled for a range of SCH operations scenarios (Appendix I, Table I-5, page I-17; Sickman et al. 2011). Expected concentrations of selenium in fish (Section I.3, Table I-5, page I-17) would be greater than some protective standards but similar to existing levels observed in Alamo and New River and similar or lower than levels observed in the Salton Sea and agricultural drainages (Section I.3, Table I-3, page I-11; page I-12, lines 4-9). Saiki et al. 2010 noted that fish in the IID drains had elevated selenium levels but did not appear to be adversely affected (Section I.3, page I-12, lines 7-9). These details are now repeated from Appendix I in Section 3.4.4.</p> <p>Fish tissue concentrations would be monitored as part of the project in order to adapt operations.</p> <p>The Draft EIS/EIR acknowledges that pupfish would likely be present in the SCH ponds and that water quality conditions in the ponds should be favorable for pupfish (refer to Impact BIO-1a in Section 3.4, Biological Resources). As discussed on page 1-5, lines 9-15, one of the objectives of the SCH Project is to minimize adverse effects on desert pupfish, and one of the means of achieving this objective is to select fish that currently share pupfish habitat. Additionally, the selected fish species were carefully evaluated for potential adverse effects on pupfish in addition to other factors, such as diversity and different tolerances of temperature and dissolved oxygen. Further analysis of the effects of the targeted fish on pupfish is not required.</p>

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Name	Com. No.	Comment	Response/Issues
		<p>Fish. Soc. 124:578 –587. Concentrations way higher than SCH – 340-390 mg/l in water and >100 ug/g fish tissue (cited in Hamilton 2004)</p> <p><u>Presentations on Pupfish</u></p> <ul style="list-style-type: none"> Keeney D, Sharon, Walker T, Michael, Thomas E, Valerie, Crayon J, John. Removal of a desert pupfish <i>Cyprinodon macularius</i> population from temporary ponds at the Salton Sea Presented to Desert Fish Council. Moab, Utah. November 2010. Keeney Sharon and John J. Crayon. Removal of a desert pupfish population from temporary ponds at the Salton Sea. Western Section The Wildlife Society. Riverside, CA. Feb 2011. Saiki, Michael K., Martin, Barbara M., Anderson, Thomas W. Unusual Dominance by Desert Pupfish in a Shallow Experimental Pond System Within the Salton Sea Basin Presented to Desert Fish Council, Moab, Utah. November 2010. 	
Office of Environmental Policy & Compliance	OEPC-5	<p>Page 3.4-14:</p> <p>The document provides a good description of the sequence of actions undertaken by DFG in introducing non-native sport fish to the Salton Sea. However, the document does not mention that the Desert Pupfish Recovery Plan (1993) indicates that the introduction of non-native sport fish precipitated a decline and endangerment of the Desert Pupfish.</p>	<p>Page 3.4-26, lines 26-28 mention the effects of sport fish on desert pupfish in the Salton Sea. Fish proposed for introduction into the SCH ponds (Table 3.4-3), however, do not include the piscivorous non-native sport fish (orangemouth corvina and Gulf croaker) that were previously introduced into the Salton Sea but are no longer present. Therefore, the decline of desert pupfish as a result of their presence is not relevant to the analysis included in the Draft EIS/EIR, and no text revisions are required.</p>
Office of Environmental Policy & Compliance	OEPC-6	<p>We suggest the final EIS include a discussion of the status of the Desert pupfish (see page 3.4-26) that addresses potential impacts, adverse or beneficial, to the Desert Pupfish related to interaction with other fish species. Evidence collected by the USGS in 2010 indicated that salinity gradient ponds, similar to those proposed by this plan, will benefit the Desert Pupfish. Specifically, an estimated 1 million Desert Pupfish were recovered and relocated prior to closure of the Reclamation/USGS experimental ponds. (See <u>Presentations on Pupfish</u>)</p>	<p>Page 3.4-26 of the Draft EIS/EIR, lines 10-12, discusses the status of desert pupfish. Although the SCH Project is not specifically designed for desert pupfish, the Draft EIS/EIR acknowledges that they would likely persist in the SCH ponds (page 3.4-35, line 32) and may even flourish, as at the USGS ponds. As discussed on page 1-7, lines 16-20 and page 3.4-15, lines 24-26, the fish species selected for inclusion in the ponds would be those that are currently present, or have been present in the past, and that have the least potential for adverse effects on desert pupfish. Because desert pupfish are already exposed to these species, their presence in the ponds would not constitute an impact of the SCH Project, and no text revisions are required.</p>
Office of Environmental Policy & Compliance	OEPC-7	<p>Page 3.4-16:</p> <p>We suggest the final EIS include the multi-year analysis of waterfowl counts for the Salton Sea region, including some shoreline habitats, provided in Barnum and Johnson (2004). Anderson (2009) also provides a wealth of species count data, nest fate data related to selenium, and site specific habitat use information for a variety of species in the Reclamation/USGS pond system all of which are directly applicable to the SCH project and might be incorporated in the final EIS.</p>	<p>The data evaluated for the SCH Project were from the U.S. Fish and Wildlife Service (USFWS) waterbird point counts, which were multi-year point counts that were specifically selected to apply to the Project locations and not to the entire Sea. The most current USFWS counts are from 2010. The comment's reference to Anderson (2009) should be Anderson (2008). This reference was reviewed with respect to description of nesting substrate. Successes and failures of the experimental ponds, as documented by Anderson, were incorporated into the</p>

Name	Com. No.	Comment	Response/Issues
		Barnum, DA, and S Johnson. 2004. The Salton Sea as important waterfowl habitat in the Pacific Flyway. <i>Studies in Avian Biol.</i> 27:100-105.	design of the SCH Project. No text revisions are required.
Office of Environmental Policy & Compliance	OEPC-8	<p>Page 3.4-50:</p> <p>The section on disease does not address the role of selenium in immune system dysfunction and how this may play a role in disease outbreaks. We suggest this section be revised and enhanced in the final EIS. References that might provide additional information are:</p> <p>Albers, PH., DE Green, and CJ Sanderson. 1996. Diagnostic criteria for selenium toxicosis in aquatic birds: dietary exposure, tissue concentrations, and macroscopic effects. <i>J. Wildl. Dis.</i>, 32:468-485.</p> <p>Fairbrother, A, and J Fowles 1990. Subchronic effects of sodium selenite and selenomethionine on several immune functions in mallards. <i>Arch. Environ. Contam. Toxicol.</i> 19:836-844.</p> <p>Lemly, AD. 1993. Metabolic stress during winter increases the toxicity of selenium to fish. <i>Aquatic Toxicol.</i> 27:133-158.</p> <p>Larsen, CT., FW Pierson, and WB Gross. 1977. Effect of dietary selenium on the response of stressed and unstressed chickens to <i>Escherichia coli</i> challenge and antigen. <i>Biol. Trace. Elem. Res.</i> 58: 169- 176.</p> <p>Wang, C., RT Lovell, and PH Klesius. 1997. Response to <i>Edwardsiella ictaluri</i> challenge by channel catfish fed organic and inorganic sources of selenium. <i>J. Aquat. Anim. Health</i>, 9: 172-179.</p> <p>Whiteley, PL., and TM Yuill. 1989. Immune function and disease resistance of waterfowl using evaporation pond systems in the southern San Joaquin Valley, California, 1986-89. Final Report to the U.S. Fish and Wildlife Service, National Wildlife Health Research Center, Madison, WI. 202 p.</p>	<p>The analysis appropriately focused on the significant impacts of the SCH Project. Expected selenium levels in fish would exceed some protective standards, but would be similar to levels observed at the Sea, Alamo estuary, and IID drains. Thus, conditions would be similar to those that already occur. Fish tissue concentrations would be monitored as part of the Project in order to adapt operations.</p> <p>Selenium in the egg is the most sensitive measure for evaluating hazards for birds (Skorupa and Ohlendorf 1991, as cited in Ohlendorf and Heinz 2011). The analytical approach used for modeling selenium concentrations in bird eggs is appropriate and adequate. Evidence from other habitats at the Salton Sea (e.g., the U.S. Geological Survey (USGS) and Reclamation Saline Habitat Ponds) have not reported selenium toxicosis or reduced hatchability (Anderson 2008, Miles et al. 2009). Bird egg concentrations would be monitored in order to adapt operations.</p> <p>A brief review of the literature provided did not change the analysis. Some papers discussed the <i>value</i> of selenium-supplemented feed to <i>support</i> immune response in farmed catfish and chickens. Another was for different, more stressful conditions than expected at SCH (much colder [4 degrees Celsius, or C] and longer [6 months]). Heinz and Fitzgerald (1993) also failed to find a link between mortality and selenium concentrations in adult mallards fed selenium-supplemented feed. No text revisions are required.</p>
Office of Environmental Policy & Compliance	OEPC-9	<p>Page 3.4-50:</p> <p>The document includes a discussion of selenium effects, but the discussion is limited to embryo mortality and impaired reproduction. There may be a potential synergistic effect of low levels of selenium and disease outbreak due to immune system dysfunction. We suggest the final EIS include a discussion of the link between selenium burden and compromised immune system functioning. (see <u>References on population-level effects of selenium</u>)</p>	<p>The discussion under Section 3.4.4.3, No Action Alternative, was modified to include additional text on fish toxicity and an expanded explanation of why bird eggs were used as the endpoint rather than look at sublethal toxicity. Additional discussion was also added to Impact BIO-5b, explaining that while selenium concentrations in fish tissue in ponds operated at salinities of 20 to 35 ppt would exceed a protective standard, this would be similar to or less than existing levels at the Salton Sea and rivers.</p>
Office of Environmental Policy & Compliance	OEPC-10	<p>Page I-3, Section I.1:</p> <p>The report by Sickman et al. (2011) used Miles et al. (2009) as a principal source of data and employed a selenium model developed by USGS (Presser and Louma, 2010). Although the model doesn't provide good approximations, project decisions were made on the basis of Appendix I. We suggest that the final EIS include appropriate caveats about the reliability of the Sickman model. We suggest that these caveats be documented in the main document so the readers</p>	<p>The application and limitations of the model are discussed in the conclusions of Appendix I, as well as in the body of the Draft EIS/EIR. The model estimates using Miles et al. data are greater than observed values when tested, and thus this is a conservative estimator of risk (Section I.3.4, page I-19, lines 11-20; Section 3.4, Impact BIO-5b, page 3.4-49, lines 37-44). This approach was discussed in expert workshops, and drafts of Sickman et al. (2011) and Appendix I were reviewed by several experts, including USGS staff. This approach and the</p>

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		are aware of the importance of this effort in the decision process.	results are reasonable and sufficient to support our conclusions; no text revisions are required.
Office of Environmental Policy & Compliance	OEPC-11	<p>Page I-20, Section I.4.1, Lines 36 & 37:</p> <p>The document states “The first pond where sediment would settle out is likely to have the highest concentrations of selenium 37 (Miles et al. 2009)”. This is an incorrect conclusion attributed to the Miles et al. 2009. The selenium risk has little to do with sediment deposition and is based on the greater rate of primary productivity associated with the lower salinity water typically observed in the first of a series of salinity gradient ponds. The increased primary productivity, relative to the downstream ponds, is responsible for the uptake of selenium from the water and sediments whereupon much of the selenium is then deposited back to the sediments or consumed in the food chain. We suggest that the statement be corrected.</p>	Both pathways and mechanisms are applicable to the SCH ponds: (1) physical transport into the ponds of selenium in water and on sediment and particulate matter and (2) uptake of selenium by primary producers within the ponds. Appendix I, section I.4.1 has been revised to provide a more suitable attribution.
Office of Environmental Policy & Compliance	OEPC-12	<p>Pages I-19 to 20, Section I.4.1:</p> <p>We applaud the extensive analysis of selenium risk; however, the strategy is limited to the use of salinity gradients. We agree that this is expected to move the system in the right direction, but if the system fails to produce the anticipated results, there is no alternative plan. For example, this document implies that if birds use the initial ponds too much, or breed there, then a system of bird deterrence will be deployed.</p> <p>Unfortunately, this strategy has failed to prevent bird use and damages at other selenium contaminated environments in California. We suggest that an adaptive management approach be adopted to allow for some flexibility should the proposed remedies fail to have the desired effects. This approach could consider the utility of approaches under consideration and the decision/determination points at which they will be deployed, the decision making responsibilities, and the criteria upon which those decisions would be made. We also suggest the final EIS include a discussion of the utility of providing mitigation wetlands using uncontaminated sources of water to offset any documented project effects.</p>	<p>As discussed in Section 2.4.4, Monitoring and Adaptive Management and in greater detail in Appendix E, Monitoring and Adaptive Management Framework, an adaptive management approach would be used in order to promote flexible decision-making that can be adjusted as new and improved information becomes available about outcomes of management actions and other events. This would apply to strategies related to selenium risk (refer to Section E.3.3. Elements of Monitoring Plan), in addition to other issues, and elements similar to those suggested in this comment would be included as part of the adaptive management plan. Please refer to Appendix E for additional detail regarding the elements of the adaptive management plan.</p> <p>Because the SCH Project would create a net increase in habitat in the face of ongoing and expected habitat loss in the absence of the Project, no mitigation wetlands would be required for these habitat ponds.</p> <p>No text revisions are required.</p>
Office of Environmental Policy & Compliance	OEPC-13	<p>Pages I-11 to 12, Section I.3.1:</p> <p>The discussion of selenium and effects on fish species is limited, especially the discussion and analysis of tilapia, the primary fish the document is counting on to supply forage to fish eating birds. We suggest that the discussion of tilapia be expanded.</p>	Selenium levels modeled for the fish of the SCH ponds would potentially be above levels of concern; however, they would not be above levels currently existing in the Salton Sea, Alamo River estuary, or IID drains. The conclusions of the effects analysis would not be altered by an expanded discussion of the selenium effects on fish species, and no text revisions are required.
Office of Environmental Policy &	OEPC-14	<p>Page I-12, Section I.3.4, line 11:</p> <p>The document states “Selenium’s most substantial effects occur in bird embryos, such as reduced hatching success and teratogenesis.” This statement is not</p>	Selenium levels in fish currently existing at the Salton Sea already exceed protective standards. Expected concentrations of selenium in fish (Section I.3, Table I-5, page I-17) would exceed some protective standards but would be similar to existing levels observed in the New and Alamo rivers and similar or

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Office of Environmental Policy & Compliance	OEPC-15	Page I-19, Section I.3.4, lines 6 & 10: The premise is not based on salinity per se, and the interpretation is that the relationship is to salinity rather than to selenium concentration in the various sources of water. The Salton Sea type of water has overall lower concentrations of selenium than the rivers. Achieving target salinity requires less of the relatively higher source of selenium to blend with the Salton Sea water, thus presenting a lower concentration of selenium. The true relationship for selenium concentration in the blended water ponds will be one of relative volume of water from different sources, not salinity directly. We suggest the final EIS include text to clarify this point.	The referenced text has been clarified to indicate that salinity per se does not affect selenium chemistry, but rather is either (1) a correlate of blending source waters or (2) a suppressor of vegetative growth.
Office of Environmental Policy & Compliance	OEPC-16	Page I-12, Section I.3.4, line 34: Anderson (2009) documents other species of birds that breed at the ponds and can be expected to utilize SCH. However, we have no record of Brown pelicans breeding at or near the ponds and records of any recent nesting by this species are more than a decade old and few in numbers. Our understanding of the historical data for breeding birds in the Salton Sea Ecosystem is that there are very limited records of any breeding by California Brown pelicans. We suggest that the document be revised accordingly.	Although brown pelicans have not been known to nest at the Salton Sea since an unsuccessful nesting attempt in 1997 (Molina and Sturm 2004), the potential for brown pelicans to nest at the SCH Project sites was correctly identified. The referenced text and that on page 3.4-29, line 6 has been revised to indicate that nesting by brown pelicans occurred in the past.
Office of Environmental Policy & Compliance	OEPC-17	Page I-18, Section I.3.3, Lines 11 & 12: This section addresses only the selenium risk to migratory birds as a result of egg impairment. We suggest that the final EIS include information on the risk to birds that are now exposed to impounded waters in a habitat type that previously has not existed at the Salton Sea.	The appendix does include information from impounded habitats that recently existed at the Salton Sea, namely, the Reclamation/USGS ponds (Table I-7, page I-18). No text revisions are required.
Environmental Protection Agency	EPA-1	Since the DEIS does not identify a preferred alternative, we have rated each alternative, pursuant to EPA's Policy and Procedures for the Review of Federal Actions Impacting the Environment. Our rating, the same for each alternative, is Lack of Objections (please see the enclosed "Summary of EPA Rating Definitions"). EPA supports the project purpose –developing a range of aquatic habitats to support fish and wildlife species dependent on the Salton Sea. As the	The U.S. Environmental Protection Agency's support for the SCH Project is noted. The Final EIS/EIR includes the jurisdictional delineation in Attachment 2. Please note that the action alternatives would create between 2,080 and 3,770 acres of ponds.

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		Draft Environmental Impact Statement (DEIS) explains, the Salton Sea habitat is being lost to increasing salinity and decreasing Sea elevation. The action alternatives would create 2,080 to 3,370 acres of aquatic habitat ponds intended to serve as a proof-of concept for an even larger restoration effort. We recommend that the FEIS include the jurisdictional delineation. We have also enclosed detailed comments on water quality impacts, farmland impacts, and alternatives.	
Environmental Protection Agency	EPA-2	Section 404, Clean Water Act Permitting The project would restore shallow water habitat lost due to the Salton Sea's ever-increasing hypersalinity and reduced area, as the Sea recedes. Construction of the proposed project may impact up to 24 acres and temporarily impact up to 1,760 acres of waters of the U.S. (p. 3.4-58); however, the jurisdictional delineation has not been verified by the Army Corps. Recommendation: The FEIS should include the findings of the Corps-verified jurisdictional delineation.	The Final EIS/EIR includes the jurisdictional delineation in Attachment 2.
Environmental Protection Agency	EPA-3	Changing Water Management Practices The DEIS discusses water quality in Section 3.11. It provides contaminant concentrations and water quality parameters in Table 3.11-5, Comparison of Water Quality Objectives with Current Conditions (2004-2010 Mean Annual). The DEIS also states that "Inflow to the Sea from the Imperial Valley is projected to continue to decline from the current annual average of 1,029,620 afy [acre-feet per year] to 723,940 afy (with adjustment for the Quantification Settlement Agreement [QSA]) by 2020 (DWR and DFG 2007)." (p. 3.11-7) This will occur about the same time as the Imperial Irrigation District fallowing program also ends in 2018. The DEIS does not clarify the potential for these changes to alter phosphorus, nitrogen and pesticide concentrations in the New and Alamo Rivers. Recommendation: The FEIS should discuss expected changes to water quality based on changing water management practices, and the potential for these changes affect the project's success.	Changing water quality in the rivers is not an impact of the SCH Project and thus is not the focus of the analysis in the Draft EIS/EIR. This is a proof-of-concept project, and changes in water quality are among the variables that would be monitored as part of the monitoring and adaptive management plan that would be implemented (Section 2.4.4). No text revisions are required.
Environmental Protection Agency	EPA-4	Contingency Planning The proposed project would provide habitat for both fish and invertebrate species, which in turn would provide forage for bird species dependent on the Salton Sea Ecosystem. The project is designed as a "proof-of-concept" project for a period of ten years, in which several project features, characteristics, and operations could be tested under an adaptive management framework. This allows operators to try different combinations of storage, salinity, and residence times to investigate how these factors could be adjusted to provide the best conditions for fish and birds presently and to inform future restoration (p. 2-10). The DEIS acknowledges the funding uncertainty of the project by stating (p. 2-	Decommissioning is discussed in Section 2.4.8. The SCH Project is planned to last until approximately 2078. At the end of this period, or when funds are no longer available to operate the Project, the SCH facilities would be decommissioned. This would require breaching the berms, removing the pumping plants and diversion structures, and filling in the sedimentation basin. A specific plan would be developed prior to decommissioning to determine the most appropriate way to accomplish this and would be subject to additional environmental review. Preparing a Contingency Plan as described in the comment is not feasible. Water would be needed to maintain habitat, but pumping would be required to divert

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		<p>10):</p> <p>"The proof-of-concept period would last for approximately 10 years after completion of construction (until 2025). By that time, managers would have had time to identify those management practices that best meet the Project goals. After the proof-of-concept period, the Project would be operated until the end of the 75-year period covered by the QSA (2078) or until funding were no longer available."</p> <p>Recommendation: The FEIS should include a Contingency Plan, should operation and management funding terminate. This Contingency Plan should provide for project modifications (e.g., breach of berms) to maximize habitat acreage and function if the project site is no longer managed and provided with an adequate water supply to maintain existing habitat.</p>	<p>water from the rivers as under the current Project. Because the rivers are incised and the water surface elevation is lower than that of the surrounding areas, even if the berms were breached, water would continue to flow down the river toward the Salton Sea, as it currently does, rather than enter the ponds. Once the SCH Project was terminated, however, no funds would be available to operate or maintain the pumps, and they are planned for removal. Even assuming that the pumps were not removed and could be operated periodically, diverting water from the rivers without blending it with saline water would increase risks from selenium. Moreover, operating the pumps only periodically would result in a very long residence time, which would result in poor water quality that would not support aquatic or avian species.</p> <p>No text revisions are required.</p>
Environmental Protection Agency	EPA-5	<p>Pond Seepage</p> <p>Appendix C discusses pond seepage as a concern for berm stability. In the construction of New River Wetlands Demonstration Project, seepage from beneath the ponds exceeded evaporation¹. Initially, some of the ponds in the proposed project are likely to be in direct contact with groundwater, substantially limiting seepage, but this is not true for ponds further from the shore; Additionally, as the level of the Salton Sea declines to -258 feet below mean sea level in 2077 (p. 2-9), the entire pond complex will be well above the water table. Mitigation measures, such as geosynthetic liners or low permeability soil layers, can readily prevent seepage.</p> <p>Recommendation: .The FEIS should discuss the relative significance of pond seepage and consider mitigation if appropriate.</p> <p>¹ Selenium in the New River and an Evaluation of Human Health Risk Reduction by the Brawley and Imperial Constructed Wetlands Demonstration Project (W-06-3), Richard M. Gersberg, San Diego State University, see: http://scerpfiles.org/iconcmgtJdoc_files/IW_06_3.pdf</p>	<p>The seepage from the SCH ponds would be different than experienced upstream at the New River Wetlands Demonstration Project because the soils present in the Sea are different than those of the farmland upstream. Based on the soil survey of the area, the soils at the Sea are considered Poorly Drained, while the soils upstream near the basin range from Poorly Drained to Well Drained. At the Sea, the hydrologic soil type is D, whereas upstream the Hydrologic Type also includes A-type soils with an ability to transmit water that ranges from Moderately High to Very High (Zimmerman 1981). Therefore, based on the soil types that are present, seepage would be less of a concern at the SCH ponds than at the New River Wetlands Demonstration Project.</p> <p>Seepage has been planned for in the SCH Project design, however, and additional mitigation is not required. Measures such as a bentonite slurry wall or other impervious liner in the berms would be considered in the final design as measures to control seepage. Seepage also has been accounted for in the Draft EIS/EIR as one of several losses and gains to the SCH ponds. The preliminary design includes an interception ditch on the landward side to collect seepage from the ponds and return it to the Sea (refer to Section 2.4.1.17). On the Sea side of the berms, seepage would flow to the Sea. By collecting seepage and routing it away from the berms, the interception ditch would prevent seepage from accumulating at the base of the berms.</p> <p>Seepage also has been accounted for in the analysis of water diversion impacts, which considered the amount of water needed to replace the water in storage in a pond plus the water to replace evaporation. Replacing the water in storage would be accomplished through direct releases to the Sea and seepage through the berms and pond bottom. Therefore, the diversion rates presented in Section 3.11 include water needed to replace direct releases, seepage, and evaporation.</p> <p>No text revisions are required.</p>

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Environmental Protection Agency	EPA-6	<p>Project Maintenance</p> <p>The DEIS describes vegetation removal from the sedimentation basin, interception ditch and around the river pump station (p. D-23), but does not describe vegetation removal from the Species Conservation Habitat (SCH) ponds. The lack of any vegetation description for the SCH ponds leads us to assume no vegetation is planned there, however, a variety of invasive species are likely to inhabit the ponds over time.</p> <p>Recommendation: The FEIS should describe and budget for vegetation removal from the SCH ponds.</p>	<p>The ponds would be managed with a minimum salinity of 20 parts per thousand (ppt), which would inhibit growth of vegetation. This is currently observed at the Sea. The vegetation that is colonizing the playa is in areas located away from the Sea and under the influence of river or drain water (brackish water). Vegetation is not present in the high saline areas. Monitoring as part of the adaptive management plan would identify any invasive plant species that colonized the ponds, however, and eradication or control methods would be implemented as needed. This was clarified in Section 2.4.5, Maintenance and Emergency Repairs.</p>
Environmental Protection Agency	EPA-7	<p>The DEIS considered the loss of 37 acres of farmland, in Impact AG-2 (permanent conversion of a small amount of farmland to nonagricultural use), less than significant for alternatives 1 and 4. Alternatives 1 and 4 convey water from the Alamo and New Rivers by gravity diversion, rather than by pumping and pipes. The next section, Impact AG-3, apparently considered the same impact significant, because the land would permanently convert Williamson Act contract land to nonagricultural use. In clarifying the significant impact, the DEIS offered the following explanation (p.3.2-10):</p> <p>The Williamson Act provides financial incentives to encourage the retention of agricultural land. As discussed under Impact AG-2, the conversion of 60 acres of agricultural land [the measure of significance for AG-2] would negligible in relation to the amount of land that is currently farmed and fallowed in the Imperial Valley. However, the conversion of land under Williamson Act contracts prior to the nonrenewal termination date would require the payment of cancellation fees (personal communication, A. Havens 2011). This impact would be significant when compared to both the existing environmental setting and No Action Alternative.</p> <p>The basis for the significance rating appears to be the payment of cancellation fees, rather than the project's environmental impacts. We also note that alternatives that include the fee payment may represent an overall project savings, when lower energy costs are also considered. Recommendation: The PEIS should clarify the entity that would need to make the fee payment, for converting Williamson Act land, and explain why this impact would be significant.</p>	<p>The loss of Williamson Act land was considered significant because the Act is specifically intended to provide financial incentives to preserve agricultural land, and the conversion of land under Williamson Act contracts would result in an environmental impact that conflicted with the Act's intent. The text has been revised to address this change. Any fees required for this loss would be paid by the Natural Resources Agency.</p> <p>The comment regarding costs of the Project alternatives is noted. No text revisions are required.</p>
Environmental Protection Agency	EPA-8	<p>The Department of Natural Resources selected Alternative 3 as the California Environmental Policy Act preferred alternative, "because it would provide greater long-term benefits by restoring the greatest amount of habitat, while minimizing environmental impacts to the extent feasible." (p. ES-21) Section 2.2 and Appendix B describe the development of the project alternatives; however, these sections do not clarify the reason for pond sizes associated with each alternative. If maximization of habitat is a primary criterion for selection of the preferred</p>	<p>Section 2.2, Alternatives Development and Appendix B, Alternatives Development Process discuss the Exclusionary Criteria and Evaluative Criteria used to formulate the pond sizes and locations. The pond sizes were based on a pond water surface elevation of -228 feet mean sea level (msl) and a maximum depth to the downstream toe of the exterior berm of 6 feet (a ground elevation of -234 feet msl). The size of the ponds was based on the area available assuming an exterior berm with a toe elevation of -234 feet. The SCH alternatives were</p>

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		<p>alternative by the Army Corps, which EPA supports, the document should provide an explanation for limiting pond size associated with alternatives at the same river. For example, do specific factors (topography or project costs) prevent construction of ponds similar to alternative 3, using gravity diversion?</p> <p>Recommendation: The FEIS should discuss constraints on the pond size associated with each alternative.</p>	<p>developed to use the available playa above -234 feet, while providing a range of options that included different pond sizes and methods of water delivery. This approach resulted in a base amount of acreage for either the New River or Alamo River sites (the base amount differs between the two sites because of local topography of the playas). Additional acreage was added to this base amount for the other alternatives by adding cascading ponds that moved the storage further into the Sea by using a water surface lower than -228 msl, or additional playa (New Far West or Wister Beach). The purpose of using different acreage configurations at each site was to bracket the possible configurations of playa and berm locations, thereby describing the full range of SCH sizes. No text revisions are necessary.</p>
State Agencies			
Native American Heritage Commission	NAHC-1	<p>This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.</p>	<p>This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).</p>
Native American Heritage Commission	NAHC-2	<p>The California Environmental Quality Act (CEQA –CA Public Resources Code 210 0-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC Sacred Lands File (SLF) search resulted as follows: Native American cultural resources were identified within one-half mile of the area of potential effect (APE) where the New River empties into the Salton Sea, but not where the Alamo River flows into the sea. Also, the absence of recorded Native American cultural resources does not preclude their existence.</p>	<p>This comment is consistent with the analysis conducted for the Draft EIS/EIR. The results of the NAHC sacred lands search performed for the SCH Project are discussed in Section 3.5, Cultural Resources, and it was determined that no such sites would be affected by the Project. The impact analysis also states, "The Project would be located in an archaeologically sensitive area, however, and construction activities could encounter cultural resources or human remains associated with the area's historical occupation by both Native Americans and Euroamericans. Such impacts on those resources could be significant under significance criteria 1, 2, 3, 4, and/or 5." c</p>
Native American Heritage Commission	NAHC-3	<p>The NAHC "Sacred Sites," as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).</p>	<p>The results of the sacred lands inventory are being treated as confidential under the SCH Project. No text revisions are required.</p>

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Native American Heritage Commission	NAHC-4	We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code §5097.95, the NAHC requests that the Native American consulting parties be provide pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties.	Letters were sent to each of the Native American contacts originally provided by the Native American Heritage Commission (NAHC). These letters are included in Appendix L. On October 13, 2011, additional letters were sent to those contacts provided by the NAHC that were not included in the original list, including Keeny Escalanti, President, Fort Yuma Quechan Indian Nation; Mary Ann Green, Chairperson, Augustine Band of Cahuilla Mission Indians; Judy Stapp, Director of Cultural Affairs, Cabazon Band of Mission Indians; and Ernest Morreo, Torres Martinez Desert Cahuilla Indian Tribe. No responses have been received from these additional contacts. No text revisions are required.
Native American Heritage Commission	NAHC-5	The NAHC recommends <i>avoidance</i> as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.	This recommendation is noted and is consistent with the mitigation identified in MM CR-1: Prepare and implement a survey plan and an inadvertent discovery plan, included in Section 3.5, Cultural Resources. The measure states that "resources considered significant would be avoided or subject to a data recovery program." The mitigation measure further indicates that the data recovery program would be designed in consultation with appropriate state (i.e., Office of Historic Preservation) and Federal agencies). No text revisions are required.
Native American Heritage Commission	NAHC-6	Furthermore, the NAHC is of the opinion that the current project remains under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4 (f) of federal NHPA (16 U.S.C. 470 <i>et seq</i>), 36 CFR Part 800.3 (f)(2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 <i>et seq.</i> and NAGPRA (25U.S.C.3001-3013) as appropriate. The 1992 <i>Secretary of the Interiors Standards for the Treatment of Historic Properties</i> were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 1317 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's <i>Standards</i> include recommendations for all 'lead agencies' to consider the <u>historic context</u> of proposed projects and to "research" the <u>cultural landscape</u> that might include the 'area of potential effect.'	The analysis included in the Draft EIS/EIR is consistent with NEPA and the regulatory requirements indicated in this comment. Consultation with Native American tribes also is being conducted in a manner that meets all applicable regulatory requirements. No text revisions are required.
Native American Heritage Commission	NAHC-7	Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious	The analysis included in the Draft EIS/EIR is consistent with the confidentiality requirements specified in this comment. No text revisions are required.

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		Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.	
Native American Heritage Commission	NAHC-8	Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than 'dedicated cemetery'.	Mitigation Measure (MM) CR-1, Prepare and implement a survey plan and an inadvertent discovery plan, outlines procedures to be followed in the event that cultural resources and human remains are discovered, includes provisions for accidentally discovered archeological resources during construction, consistent with the regulations specified in this comment. No text revisions are required.
Native American Heritage Commission	NAHC-9	To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.	Representatives of the Torres Martinez Tribe have been invited to quarterly stakeholder meetings, and the tribes identified by the NAHC have received periodic newsletters advising them of the Project's progress. They also have received notices of all public meetings, including scoping meetings (one of which was held on the Torres Martinez Reservation) and meetings to provide comments on the Draft EIS/EIR, in addition to the tribal consultation letters sent by the Corps. No scoping comments or comments on the Draft EIS/EIR were received from any tribal entities, nor were any substantive comments received in response to the tribal consultation being conducted as part of the Section 106 process. As discussed in Section 6.2.3, the only responses have been a general statement of support for the Project and request for clarification of the location of the SCH Project in relation to Obsidian Butte from the Quechan Tribe and a statement that the Cocopah Indian Tribe has no comments at this time. No text revisions are required.
Dept. of Conservation	DOGGR-1	On behalf of the Division, I have included a letter that comments on the Project. I have also included a map scan that helps illustrate what we have found.	This comment is noted. No text revisions are required.
Dept. of Conservation	DOGGR-2	In addition, on page 308 – line 39-40, there is a mention that CalEnergy is operating a zinc extraction plant. I believe that they used to have a zinc extraction facility, but do not currently operate one now.	The reference to the CalEnergy zinc extraction plant has been removed from the referenced text since it was confirmed that the plant has ceased to operate.
Dept. of Conservation	DOGGR-3	There may be a potential risk of construction near plugged and abandoned wells. According the Division's database, eleven plugged and abandoned shallow temperature gradient wells are located in or near the area of the proposed project that may require plugging to present standards if the wells are exposed or the present abandonment plugs are altered. The attached map shows the approximate location of these wells. In addition, the geothermal well, "Westmorland" 47 (API # 025-90105), was not plugged and abandoned before being submerged. It will require plugging when sea level recedes and the well is exposed. This office must be contacted to obtain information on the requirements for approval to perform any remedial operations on these wells.	Section 2 has been clarified to indicate that prior to construction, DOGGR records about the location of the wells will be reviewed, and any wells present in the construction area will be identified in the field and marked to avoid contact by construction activities. Additionally, DOGGR will be contracted to obtain information on the requirements for approval to perform any remedial operations on these wells.

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Dept. of Toxic Substances Control	DTSC-1	Based on the review of the submitted document DTSC has no further comments.	The lack of comments is noted.
California Regional Water Quality Control Board	RWQCB-1	<p>I wish to call your attention to an enclosed agenda item from the September 15, 2011 meeting of the State of California CRWQCB, CRBR. The Board enforces water quality standards for the 110 El Centro Generating Station in returning cooling water to a canal which flows into the Salton Sea. This cooling water would average 700,000 gallons per day of potential fresh water for the Salton Sea.</p> <p>However, because it is cheaper IID has chosen to use deep well injection of the cooling water thereby avoiding any cleanup costs and forever losing that water for the Salton Sea.</p> <p>The Water Quality Board has no jurisdiction over that decision and there were no noted comments from either State or Fish and Game or Fish and Wildlife. EPA limited its comments to technical well drilling issues.</p> <p>The vital freshwater needs of the Salton Sea appeared to not appear in this process I and I suspect this disconnect is not singular in occurrence.</p> <p>The State of California needs to have an active engaged role to keep fresh water flowing into the Sea!</p>	This is not a comment on the SCH Project, nor does it raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). No text revisions are required.
State Lands Commission	CSLC-1	<p>The CSLC has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The CSLC also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6301, 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust.</p> <p>As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court. On navigable non-tidal waterways, including lakes, the State holds fee ownership of the bed of the waterway landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high water mark, except where the boundary has been fixed by agreement or a court. Such</p>	The need for a lease from CSLC is acknowledged in Sections 1.9.3, 1.10, 3.13.2.1, and 6.1.2.4 for those alternatives that would require the use of APN 020-010-030. These sections and Figure 1-2 were modified to address the area that is the east ½ of the northeast ¼ of Section 16, Township 11 South, Range 13 East, San Bernardino Meridian (APN 020-010-040). These sections acknowledge that any soil removed from this parcel under Alternatives 5 or 6 would require a lease from CSLC.

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		<p>boundaries may not be readily apparent from present day site inspections. Based on CLSC staff's review of the Project and as outlined in the CSLC letter dated August 22, 2011(enclosed):</p> <ul style="list-style-type: none"> ▪ The proposed Project may include lands within which the State has reserved mineral interests¹ and ▪ Two of the Alamo River alternatives are located within lands acquired by the CSLC from the Imperial Irrigation District (IID) under sovereign land exchange SLL 10: 40 acres described as assessor's parcel number (APN) 020-010-030. The IID has reserved certain rights-of-way and easements. <p>Should the Project involve dredging on lands within which the State has reserved mineral interests, a lease from CSLC may be required. Should the Project incorporate Alamo River alternatives 4 and 6, including APN 020-010-030, a lease from CSLC would be required.</p> <p>¹Please be advised that the Alamo River Alternatives will be located within lands the State acquired and patented as School Lands, all minerals reserved on the East ½ of the Northeast ¼ of Section 16, Township 11 South, Range 13 East, San Bernardino Meridian. Any movement or removal of a portion of the mineral estate may require a CSLC lease or permit.</p>	
State Lands Commission	CSLC-2	<p><u>Dredging, Excavation, or Placement of Structures</u></p> <p>The draft EIS/EIR states that "Project construction ...would include some actions likely to involve dredging, excavation, or placement of structures in Waters of the United States, including wetlands" (p. 6-2), and "...a hydraulic dredge would be used to provide greater depth to borrow channels or create new channels through areas with soft soils. Soils removed as dredge spoils would be placed either within the Project footprint or outside of the exterior berm in the Sea" (p. 2-15).</p> <p>Although the draft EIS/EIR estimates over 1,800 hours of dredging time during the two-year construction schedule, it does not appear to include an estimate of the quantity of dredged spoils that may be generated by the Project, and provides only vague information about where the spoils would be placed.</p> <p>In order to determine CSLC jurisdiction relative to lands within which the State has reserved mineral interests, CSLC staff requests that the EIS/EIR include more specific information regarding proposed dredging activities (e.g., location of dredging, quantity of spoils generated and where the dredged spoils would be placed). Any construction activity which would occur on sovereign lands under CSLC jurisdiction (i.e., APN 020-010-030) such as dredging, excavation, building of new berms³, modifications to existing berms, or bank protection (e.g., placement of riprap or other materials) would require a lease from the CSLC.</p>	<p>Section 2.4.1.1, Basic Design Considerations, states that "<i>The ground surface within the SCH ponds would be excavated (with a balance between cut and fill) to acquire material to build the berms and habitat islands.</i> Figures 2-6 through 2-11 show conceptual layouts of the SCH ponds, including berm locations. The specific locations of islands have not yet been determined, but <i>all pond construction would occur within the footprint shown in these figures</i>" (emphasis added). Section 1.9.3 indicates that the use of Parcel 010-020-030 under Alternatives 4 and 6 would require a lease agreement with the CSLC.</p> <p>The comment regarding the ongoing presence of the parking/staging area, pond, berms, and islands at the Salton Sea Shallow Habitat Pilot Project is noted. These features would be considered as part of the final design if Alternatives 4 or 6 were selected for implementation. No text revisions are required.</p>

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		³ On February 9, 2006, a five year lease (PRC 8665.9) was issued to the Bureau of Reclamation for the construction of a parking/staging area and creation, use and maintenance of a pond, less than two feet deep, and four islands for the purpose of providing an area for bird nesting in connection with the Salton Sea Shallow Habitat Pilot Project. Upon completion of the project, all equipment was to be removed and the constructed berms and islands were to remain in place as requested by IID. Aerial photos of the vicinity indicate that the prior parking/staging area, pond, berms and islands are still in place on the parcel. This project is also referenced in section 1.6.3 in the EIS/EIR (p. 1-9).	
State Lands Commission	CSLC-3	It should be noted that all decisions on lease issuance and Public Trust consistency of leases and proposed uses of sovereign lands are made only by the three-member panel of Commissioners, not by CSLC staff or other agencies; as such, the statement on page 6-9 of the EIS/EIR that the Project falls "within the definition of uses consistent with the Public Trust Doctrine" should be clarified or removed.	The referenced text was modified as indicated.
State Lands Commission	CSLC-4	<u>Greenhouse Gas (GHG) Emissions</u> The EIS/EIR would benefit from a more clear presentation of a specific measure or metric against which the Project's impacts are measured to determine significance. As presented, the EIS/EIR only discusses the GHG significance thresholds in very general terms that limit the CSLC's ability to compare the Project's incremental change to the baseline against a readily identified, measureable threshold. As such, it is difficult to draw the logical link, using substantial evidence, between the incremental change to the environment and the ultimate "less than significant impact" and "no mitigation required" conclusions for GHGs. Notwithstanding the statement in the EIS/EIR that Project-related construction emissions are well under the 25,000 metric tons of carbon dioxide equivalents (CO ₂ e) that would trigger reporting for "major facilities" (EIS/EIR p. 3.9-12), which is not held out in the EIS/EIR as the document's stated significance threshold, CSLC staff suggests that the potential to generate the equivalent of up to 6,650 metric tons of CO ₂ e per year (under Alternative 3) for the duration of Project construction could be considered a significant impact that requires mitigation absent a more clearly articulated threshold. If the EIS/EIR concludes that no feasible mitigation is available, then the EIS/EIR should state that the impact is significant and unavoidable.	<p>The discussion in Section 3.9, Greenhouse Gas Emissions/Climate Changes has been modified to more clearly state the justification for the significance determination, although the conclusions remain unchanged.</p> <p>As discussed on page 3.9-11, lines 24-26, no quantitative GHG thresholds of significance that would apply to the Project have been established at the Federal, state, or local levels.</p> <p>Under both NEPA and CEQA, lead agencies are given the discretion to establish their own qualitative thresholds. The Council on Environmental Quality's [CEQ] Draft National Environmental Policy Act Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (CEQ 2010) indicates that in an agency's analysis of direct effects, it would be appropriate to: (1) quantify cumulative emissions over the life of the project; (2) discuss measures to reduce GHG emissions, including consideration of reasonable alternatives; and (3) <i>qualitatively</i> discuss the link between such GHG emissions and climate change (emphasis added). Section 15064.4(a)(2) of the CEQA Guidelines also gives a lead agency the discretion to determine, in the context of a particular project, whether to rely on a qualitative analysis or performance-based standards.</p> <p>Therefore, in the absence of a quantitative threshold of significance, the lead agencies for the SCH Project have developed a multi-pronged, qualitative approach that takes into consideration factors such as:</p> <ul style="list-style-type: none"> ▪ Consistency or potential for conflict with plans to reduce GHG emissions. ▪ Relative amounts of GHG emissions, taking into consideration whether the amount of emissions is small compared to the 25,000 MTCO₂e reporting threshold for AB 32. The CEQ also references the 25,000 MTCO₂e threshold, not as an indicator of a threshold of significant effects, but rather

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			<p>as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHGs (refer to Section 3.9.2.1). The 7,000 MTCO₂e annual threshold of significance suggested by the California Air Resources Board draft guidance in 2008 also is used as a guideline.</p> <ul style="list-style-type: none"> ▪ Potential to contribute to a lower carbon future and energy efficiency. <p>As discussed under Impact GHG-2, the Project would not conflict with plans to reduce GHG emissions.</p> <p>As discussed on page 3.9-12, at 5,800 tonnes of CO₂e over the 2-year construction period, the annual construction emissions for Alternative 1 are well under the annual 25,000 MTCO₂e reporting threshold. They also are well under the draft annual 7,000 MTCO₂e threshold. This conclusion is applicable to all Project alternatives. (Note that the 6,650 tonnes referenced in the comment are total emissions that would occur over a 2-year period and are not annual emissions.) To provide additional perspective, if the 6,650 tonnes of total construction emissions were amortized over the approximately 64-year Project duration, they would be approximately 52 MTCO₂e per year. (The Sacramento Metropolitan Air Quality Management District [2011] has identified amortization as an appropriate method of analyzing short-term construction emissions.)</p> <p>Direct annual emissions of GHG during operations would be minor. Alternative 3, the alternative that would generate the most emissions, would result in about 103 tonnes of direct emissions annually. Combined direct and indirect emissions would be about 3,120 annually. This, too, is well under the 25,000 MTCO₂e reporting threshold and the draft 7,000 MTCO₂e threshold.</p> <p>The Project has been designed to be energy-efficient. Only electric pumps would be used during operations, in order to minimize direct emissions. Power to supply the Project would be provided by IID, which is adding more renewable energy sources into its resource mix in order to meet regulatory requirements (IID 2010). Thus, indirect emissions would be expected to decrease over time. Additionally, as indicated on page 3.9-15, the Project would comply with best management practices that are intended to reduce GHG emissions during construction, operations, and maintenance to the extent feasible (refer to Section 2.4.7 for a description of these practices). Using these best management practices would contribute to energy efficiency.</p>
State Lands Commission	CSLC-5	CSLC staff also requests that the EIS/EIR reanalyze the appropriateness of the conclusion that the cumulative impacts to global climate change, from Project construction and operation, are less than significant and that no mitigation is required.	As indicated on page 3.9-11, lines 20-24, the environmental effects of GHG emissions from this Project are addressed as cumulative impacts. Please refer to the response to CLSC-4 regarding the significance determination. No additional text revisions are required

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State Lands Commission	CSLC-6	<p>Mitigation Measure (MM) CR-1 (p. 3.5-11) requires preparation and implementation of a survey plan and an inadvertent discovery plan. The measure states that resources considered significant would be avoided or subject to a data recovery program. The data recovery program would be designed in consultation with appropriate state (i.e., Office of Historic Preservation) and Federal agencies and include excavation of an archaeological site to recover any buried artifacts or other data.</p> <p>Please note that the Agency should also consult with the CSLC in the event that any cultural resources are discovered on sovereign lands under the jurisdiction of the CSLC (i.e., APN 020-010-030). Any archaeological site or historic resource remaining on State lands for more than 50 years is presumed to be significant.</p>	The California Natural Resources Agency would consult with the California State Lands Commission should any cultural resources be encountered on sovereign lands under its jurisdiction. The preferred alternative, however, does not require disturbance to APN 020-010-030. No text revisions are required.
State Lands Commission	CSLC-7	<p>Mitigation Monitoring and Reporting Program (MMRP)</p> <p>Upon adoption of the EIS/EIR, the Agency should provide a MMRP pursuant to State CEQA Guidelines section 15074, subdivision (d). The MMRP should include methods for coordination, timing for implementation of mitigation measures and list all parties and/or state and federal agencies, in addition to the Agency, responsible for ensuring compliance and enforcement through permit conditions, agreements or other measures during construction and management of the Project.</p>	A Mitigation Monitoring and Reporting Program is included as Attachment 4 to the Final EIS/EIR.
Local/Regional Agencies			
Imperial Irrigation District	IID-1	1. IID is supportive of implementing the SCH project and believes this is a reasonable first step in restoration at the Salton Sea.	IID's support of the SCH Project is noted.
Imperial Irrigation District	IID-2	2. In a number of places, the document mentions applications filed by the Metropolitan District of Southern California (Metropolitan) with the State Water Resources Control Board (SWRCB) to appropriate water from the New and Alamo Rivers for use by Metropolitan. It also notes that no action has been taken on these applications because the required environmental analysis has not been done. The document should state that IID has the right to the use of water from agricultural return flows from the IID service area. If Metropolitan were to proceed with its applications, IID and others would have the right to protest the application. The quantity of agricultural drain flow in a given year is directly related to how much water is used in irrigation in the first instance. Water orders vary greatly, depending upon many factors, including the economy, weather conditions, rainfall, types of crops grown, etc., which in turn means that the drain flow varies greatly, so it would not be a particularly reliable source of water for a potable water supplier.	Please refer to Master Response 6, Water Rights.

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Imperial Irrigation District	IID-3	3. Subsection 1-3 CEQA Project Goals and Objectives/NEPA Purpose and Need: Discussion of the Quantification Settlement Agreement (QSA) states IID is required to provide conserved water to the Salton Sea to mitigate the effects of transfer on salinity until 2017. IID requests that this be updated to reflect that IID and San Diego County Water Authority will file a petition with SWRCB requesting that mitigation water to the Salton Sea stop at the end of 2013 and a higher functional value and longer lasting mitigation be substituted for the mitigation water in the form of habitat creation similar to that proposed by California Department of Fish and Game's (CDFG) SCH.	The referenced text has been modified as indicated in the comment.
Imperial Irrigation District	IID-4	Subsection 1.10 Required Permits and Consultations, Page 1-12: Discussion should include IID approval of use of agricultural return flows in Alamo and New Rivers.	The referenced text has been modified as indicated.
Imperial Irrigation District	IID-5	4. IID believes that the proposed SCH should be built in areas outside of the Salton Sea Known Geothermal Resource Area (KGRA), which is essentially the areas immediately east of the New River, continuing east past the Alamo River and through the Morton Bay area, and/or the County of Imperial Geothermal Overlay. If alternatives are implemented within the KGRA, specific easements or other provisions for geothermal activity should be established prior to implementation of the alternative. IID believes that geothermal development and habitat creation/ management are compatible and both need to be considered equally in the implementation of the SCH.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Imperial Irrigation District	IID-6	5. The proposed SCH project should be designed and located so as to minimize loss of active or potential agricultural land and to minimize loss of production on agricultural land during the construction and operation of the project.	The only alternatives requiring the use of agricultural land would be those involving gravity diversion (Alternatives 1 and 4). The preferred alternative (Alternative 3) was selected, in part, to minimize impacts on agricultural land during construction and operation. As discussed in Section 2.4.1.23, for all alternatives, if easements from private owners were required, the easement would be structured so as to not preclude the continued use of the property by the landowner. The land in the easement would be disturbed during construction but then would be returned to the preexisting condition after construction, except at the sites of permanent facilities, such as pump stations, diversion works, and pipeline access manholes. Thus, all alternatives would be structured to minimize impacts on agricultural land. No text revisions are required.
Imperial Irrigation District	IID-7	6. IID suggests that some fresh water cells should be included in the SCH. This would allow for additional research into fresh water selenium pathways and perhaps help to develop better risk assessment criteria for freshwater systems around the Salton Sea.	Please refer to Master Response 7, Operations and Adaptive Management.
Imperial Irrigation	IID-8	7. Page 2-4, Subsection 2.2.1 Exclusionary Criteria, 1. Available Water Rights, Lines 13-19: IID has the right to the use of all agricultural return flows from IID's	The referenced text has been modified as indicated.

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District		service area (which is the majority of the flows in the New and Alamo Rivers). Furthermore, the document should state that IID has the right to the use of all water from its agricultural return flows and that the SCH Project must obtain IID's permission to use the return flow.	
Imperial Irrigation District	IID-9	8. Page 2.10, Subsection 2.3.2.3 Pupfish Connectivity, Lines 3-15: Implementation of any of the alternatives (except no action) will require coordination with IID to identify the most efficient methods for drain connectivity. IID and the state SCH team have coordinated during the design and preparation of the Draft EIS/EIR and IID recommends that the coordination continue during the final design and implementation stages of the project. IID would suggest that an IID representative be included in the final planning, design and construction coordination meetings for the project.	The Project team will continue coordinating with IID to identify and address these issues. IID will be a reviewer of the final plans, as indicated in the revised text of Section 1.10, Required Permits and Consultations.
Imperial Irrigation District	IID-10	9. Page 2-13, Subsection 2.4.1.3 Berms, Lines 32-40: In keeping with the idea of the initial ponds being a pilot project to inform later designs and habitat creation, IID suggests incorporating some geotube barriers in the design to evaluate their effectiveness and the logistics of their installation.	Geotubes were discussed on page 2-13, lines 32-40 and could be examined as part of the final design based on the results of the analysis of the local soils. No text revisions are required.
Imperial Irrigation District	IID-11	10. Pages 2-15 and 2-16, Subsection 2.4.1.7 Water Supply, Lines 40-44 and 1-5, respectively: Again in keeping with the pilot project concept, IID suggests that the state evaluate various salinity conditions and how that salinity concentration impacts other area wildlife.	Please refer to Master Response 7, Operations and Adaptive Management.
Imperial Irrigation District	IID-12	11. Page 2-16, Subsection 2.4.1.10 River Diversion Gravity Diversion Structure, Lines 27-35: As has been discussed in the preliminary design meetings and public workshops, any water control structures in the river channels should be designed to avoid or mitigate for impacts to IID and farmer irrigation infrastructure (including tail and tile water discharges). This appears to be the case, based on the discussion in the Draft EIS/EIR, but IID would request a review of the final design plans to verify. In general, IID supports pipeline delivery systems over open channels because of the reduced footprint required for pipelines (thus reducing the loss of additional agricultural land and production).	As indicated, the Project's water control structures in the river channels are being designed to avoid impacts on IID and farmer irrigation infrastructure (including tail and tile water discharges). The Project team will continue coordinating with IID as the design progresses, and IID will review the final plans. As discussed in Appendix B, Alternatives Development, an open channel was eliminated during the initial screening phase and was not included in the alternatives carried forward for detailed analysis. No text revisions are required.
Imperial Irrigation District	IID-13	12. Page 2-17, Subsection 2.4.1.15 Power Supply, Lines 31-38: See item no. 17.	Please refer to the response to IID-18.
Imperial Irrigation District	IID-14	13. Page 2-19, Subsection 2.4.1.17 Interception Ditch/Local Drainage, Lines 14-30: The SCH team has coordinated with IID in the planning and preparation of the Draft EIS/EIR regarding drainage issues and IID recommends that coordination should continue to address stormwater and agricultural drainage potentially impacted by the project and the pupfish connectivity issue. <i>See item</i>	The Project team will continue coordinating with IID to identify and address these issues. IID will reviewer the final plans. No text revisions are required.

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		<i>no. 8 regarding IID representative on the design/implementation team.</i>	
Imperial Irrigation District	IID-15	14. Page 2-20, Subsection 2.4.19 Bird Habitat Features, Lines 1-25: IID supports the multiple habitat approach to the SCH. We also support the state's plan to use these cells, not only as functional habitat, but as a pilot project to inform future projects and operations regarding selenium and salinity concentrations in fish and avian habitat areas. IID would like to continue the science partnership that the state has developed with various academic organizations, tribal entities, private firms, state and federal wildlife, water and land use agencies and the IID that has proved so successful in the development of this plan and the advancement of other restoration, reclamation and mitigation projects around the Salton Sea.	IID's support for the project is noted. The Project team will continue coordinating with IID to identify and address issues related to the referenced partnerships. No text revisions are required.
Imperial Irrigation District	IID-16	15. Page 2-21, Subsection 2.4.1.23 Land Acquisition, Lines 26-28: IID and the state design team have had preliminary discussions regarding property acquisition and the IID Board has passed a resolution in support of the concept of the SCH project, conditioned on the design not precluding or significantly inhibiting other land uses. It is very important to the IID that the SCH project be compatible with geothermal energy resources and continued agricultural production either through selective location or design/permitting criteria. Final disposition of any IID-owned land will require IID Board approval.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Imperial Irrigation District	IID-17	16. Page 2-22, Subsection 2.4.1.25 Project Compatibility with other Potential Future Land Uses – Geothermal, Lines 10-31: IID appreciates that the SCH team consulted with IID and the geothermal development groups during the project development. There should be additional coordination during the final design and implementation to assure that geothermal development activity is adequately recognized as a compatible land use and that potential future development in the vicinity of the SCH is not significantly curtailed by the project.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Imperial Irrigation District	IID-18	17. Page 2-25, Subsection 2.4.2.9 Power Line Construction, Lines 7-14: IID Energy will require coordination review and approval of any power line construction that will be incorporated into the IID distribution system.	The text has been modified as indicated.
Imperial Irrigation District	IID-19	18. Section 3.2 Agricultural Resources: <i>See item no. 33 on recoverable farmland.</i>	Please refer to the response to IID-34.
Imperial Irrigation District	IID-20	19. Pages 3.3-23 to 3.3-26, Subsection 3.3.4 Air Quality: IID has, or is in the process of, implementing the measures included in the Quantification Settlement Agreement Implementation section of the Draft EIS/EIR. Access restrictions have been implemented and IID continues to coordinate with Imperial County and other land owners on gating specific areas. Several years ago the Joint Powers Authority (JPA) and the State of California partnered to implement	The referenced text has been modified as indicated in the comment.

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		<p>six air stations around the Salton Sea to gather data for the QSA mitigation requirements and to provide data to the state's Salton Sea Ecosystem Restoration project. The JPA funded the installation and operation of six stations that monitor metrological and particulate matter data around the Salton Sea. As part of that plan the state would add gaseous monitoring equipment to the stations at a later date, subject to available state funding. The stations have been in operation, collecting metrological and particulate matter data for several years. The JPA has also funded several pilot projects at the Salton Sea. These projects include sheet flow flooding of several areas to evaluate potential vegetation enhancement and inundation of the playa as dust emission controls. Additional projects, including the application of surfactant products to the exposed playa are also underway. Several pilot projects to evaluate other land uses for exposed playa, such as solar energy generation, reclaimed agricultural, shallow water habitat are in the planning stages. IID also plans to implement more traditional control measures such as wind barriers.</p>	
Imperial Irrigation District	IID-21	<p>20. Section 3.4 Biological Resources: The river deltas are recognized in the QSA draft Habitat Conservation Plan (HCP) and related permits as high value habitat for bird species. Any diversions from the river channels should be managed so as to prevent any reduction in habitat value within the reaches of the river delta.</p>	<p>As the Salton Sea recedes, the river deltas and associated riparian habitat will change considerably regardless of whether the SCH Project is implemented. The deltas will extend (move away from the existing shoreline) across the exposed Sea bed fairly rapidly in response to the receding Sea irrespective of Project implementation. The amount of vegetation that colonizes the margins of the river/delta on the exposed Sea bed will depend on the amount of sediment deposited, salinity of the sediment (including the Sea bed), and time. Dredging to maintain flow through the deltas and big storm events will continue to change the deltas more than the SCH Project would.</p> <p>Diversion of water for the SCH Project would reduce the volume of water flowing through the delta, but would not eliminate the delta or adjacent habitat at the river mouth of the selected site. The river would still flow into the Sea, but some of the water would be diverted into the SCH ponds along with some of the sediment carried by river flow. The remaining sediment would continue to be deposited in the Sea so that the existing delta formation process would continue beyond the SCH ponds. Habitat at these ponds would partially offset the loss of delta habitat that will occur under No Action.</p> <p>Habitat for nesting bird colonies (large trees) would remain where it is due to high groundwater levels maintained by the adjacent SCH ponds. The interface between the river and the Sea, however, will move seaward (not due to the Project), and the reduced river flow (due to the Project) would reduce the size of the mixing zone in the Sea. Thus, habitat value of the delta at the selected site will change unrelated to the SCH Project (other river deltas would not be affected by the SCH Project). Riverine aquatic habitat would remain downstream of the Project diversion, just with less water, and riparian habitat would remain at its</p>

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			current location with gradual extension along the river margins as the river extends across the exposed Sea bed. The size of the mixing zone where the river enters the Sea would decrease due to the lower flow after water diversion for the SCH ponds. Thus, no additional measures are required to manage diversions from the river channels in order to prevent any reduction in habitat value within the reaches of the river deltas. No text revisions are required.
Imperial Irrigation District	IID-22	21. Page 3.4-30, Subsection 3.4.42 Resources Thresholds of Significance, Lines 34-38: While IID's Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is not approved; IID has been operating under the requirements of the draft plan. We believe that the SCH project should be compatible with the requirements that IID has been operating under since the completion of the draft HCP and related authorizations and documents.	IID's belief that the SCH project should be compatible with the requirements that IID has been operating under since the completion of the draft HCP and related authorizations and documents is noted. No text revisions are required.
Imperial Irrigation District	IID-23	22. Section 3.6.1 Energy Consumption: Based on the projected inflows into the SCH system, energy consumption may be very high. IID requests that the hydrologic and water balance data and models be reviewed by IID and others to verify flow rates. Until this verification is completed it is difficult to comment on proposed energy consumption rates for pumping.	The Project team will continue coordinating with IID to identify and address these issues, and IID will review the final plans. The hydrologic analysis has been reviewed with IID and submitted for internal use by IID.
Imperial Irrigation District	IID-24	23. Section 3.11 Hydrology and Water Quality general comment: IID requests access to the hydrologic model and data used in the evaluation of future Salton Sea water elevations and salinity concentrations. This data is necessary to further evaluate the analysis presented and compare it to other existing Salton Sea hydrologic models.	The hydrologic analysis has been reviewed with IID and submitted for internal use by IID. Based on discussions with IID, the impact analysis in Section 3.11, Hydrology and Water Quality was revised to reflect the projected Sea elevation and salinity under the CEQA Baseline established in the Salton Sea Ecosystem Restoration Program PEIR. The analysis contained in the Draft EIS/EIR used the Variability Conditions Inflow, which assumes lower future inflows to the Sea than assumed under the CEQA Baseline and thus presented a worst-case scenario. The conclusions remained unchanged.
Imperial Irrigation District	IID-25	24. Page 3.11-3, Subsection 3.11.2.1 Water Rights, Lines 3-12: IID has the right to the use of all return agricultural flows in the Alamo and New rivers that come from its service area. <i>See item no. 7.</i>	The text has been modified as indicated in the comment.
Imperial Irrigation District	IID-26	25. Page 3.11-3, Subsection 3.11.2.2 Salton Sea and Agricultural Drainage, Lines 19-20: The Salton Sea has also been declared a permanent flowage easement for IID and the Coachella Valley Water District in December, 2000 as part of the Torres Martinez Desert Cahuilla Indians Claims Settlement (Pub. L. 106-568, 114 Stat.2906. See 25 U.S.C. && 1778 a (6); 1778e (a), (b)).	The text has been modified as indicated in the comment.
Imperial Irrigation District	IID-27	26. Page 3.11-7, Subsection 3.11.2.5 Surface Water Hydrology-Salton Sea, Lines 8-9: Reduction in water orders from farmers during the last 10 years, reduced flows from Mexico and lower precipitation have also contributed to the	The text has been modified as indicated in the comment.

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		decline in flows in the New and Alamo Rivers.	
Imperial Irrigation District	IID-28	27. Page 3.11-11, Subsection 3.11.2.5 Surface Water Hydrology, Lines 30-32: Please verify accuracy of claim that 10 percent is agricultural drain water.	The text has been clarified to indicate that agricultural drainage from the Imperial Valley <i>directly</i> to the Sea comprises about 10 percent of total Imperial Valley contribution to the Sea's inflow.
Imperial Irrigation District	IID-29	28. Pages 3.11-21 to 3.11-30, Subsection 3.11.3.1 Surface Water Hydrology Impact Analysis Methodology: It appears that the flow rates for inflow to the cells is high. IID would like to review the modeling data to further evaluate the flow rates suggested in the document. IID suggests that resident time be evaluated as part of the operation of the SCH cells. A water quality and biological monitoring program could also be implemented to evaluate the habitat parameters under different resident times. If, based on the water quality and habitat evaluations, longer resident times are supported; it could mean a reduction in operation costs and water use.	The Project team will continue coordinating with IID to identify and address these issues, and IID will review the final plans. The pond residence time would be evaluated as part of the adaptive management plan for the SCH Project. Biological and physical monitoring also is included in the adaptive management plan so operations can be modified in response to biological conditions. The flow rates were calculated as part of the Draft EIS/EIR and are based on the amount of water needed to replace the volume of pond water within the specified residence time plus the amount of evaporation. No text revisions are required.
Imperial Irrigation District	IID-30	29. Pages 3.11-30 and 3.11-31, Subsection 3.11.3.2 Thresholds of Significance, Lines 42-44 and 1-3, respectively: Excavation of sediment ponds 15-20 feet below existing ground surface may intercept localized water tables and may experience soil liquefaction making excavation difficult. Even with dewatering this may be difficult.	This comment is noted; were an alternative selected that required excavation of an upstream sedimentation basin (which is not part of the State's preferred alternative identified in the Draft EIS/EIR), additional, detailed geotechnical and groundwater studies would be conducted. These investigations would examine the soil profile, soil strength, and other geotechnical properties of the soil. In addition, a licensed geotechnical engineer would prepare excavation plans for the construction of the basin. Site-specific requirements could include temporary dewatering using pumped wells or well points to avoid running sands and/or slope instability. Permanent slope stabilization measures may include over-excavating the slopes and replacing them with a compacted fill buttress that incorporates a graded-filter-protected internal drain. No text revisions are required.
Imperial Irrigation District	IID-31	30. Page 3.11-35, Subsection 3.11.3.3 No Action Alternative, Lines 22-28: Some of the current projections for inflows from Mexico are much less than those noted in the Draft EIS/EIR. Reuse of New River water in Mexico may significantly reduce inflow volumes in future years.	The inflow projections used were derived from the Salton Sea Ecosystem Restoration Program PEIR and are based on the assumption of declining inflows to the Sea. As discussed in the response to IID-24, the analysis has been updated to reflect the PEIR's CEQA Baseline. Projections of future inflows are uncertain and this uncertainty was identified in the PEIR with the development of two baseline conditions. Impacts have been assessed under both of these baseline conditions, and the impacts of the SCH Project were found to be less than significant. No text revisions are required.
Imperial Irrigation District	IID-32	31. Page 3.13-9, Subsection 3.13.3.5 Future Land Use in the Study Area - Geothermal Energy Production, Line 27: The well pads could include multiple well heads with directional boring under the surrounding SCH areas.	The text has been modified as indicated in the comment.
Imperial Irrigation	IID-33	32. Page 3.13-16, Subsection 3.13.4.4 Alternative 1 – New River Gravity Diversion – Cascading Ponds, Lines 16-27: The planned SCH should include	Please refer to Master Response 8, Compatibility with Geothermal Development.

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District		provisions that establish and preserve access for geothermal activity after suitable habitat is established in the ponds. Given that the ponds are designed to support multiple species, including some that are protected or otherwise recognized under state or federal regulation and guidelines, there should be some acknowledgement that the future or current presence of those species in the SCH areas will not preclude geothermal development activity. Note: this comment applies to all of the alternatives.	
Imperial Irrigation District	IID-34	33. Page 3.19-7, Subsection 3.19.3.3 No Action Alternative, Lines 22-30: Some areas along the western shoreline of the Salton Sea (Elmore Ranch area) contain more well drained soils than the river delta areas and may be reclaimed as farmland without the installation of tile lines (thus eliminating or reducing the need for ground surface to be 6-7 feet above water level). Additionally, IID and local farmers are investigating the potential for reclamation of these soils without excessive leeching (with repeated deep tillage of the soil to promote aeration). Most of these areas are well to the west of any of the alternatives presented, but some reclaimed areas may be identified within the river deltas. IID agrees that reclamation of farmland within the area of the proposed alternatives is speculative.	The text has been modified as indicated in the comment. IID's agreement that reclamation of farmland within the area of the proposed alternatives is speculative is noted.
Imperial Irrigation District	IID-35	34. Pages D-4 and D-5, Section D.2.6 Agricultural Drain Interception Ditch, Lines 39-42 and 1-2, respectively: Activities conducted by IID in the interception ditches would be subject to the requirements of the HCP and related permits and authorizations. As with other IID maintained drains, IID would have the final decisions on the maintenance conducted (subject to the provisions of the HCP and related documents).	The text has been modified as indicated in the comment.
Imperial Irrigation District	IID-36	35. Page D-6, Section D.3.2 Salinity of Stored Water: IID agrees with the concept of testing different salinities under various conditions to more closely evaluate selenium concentrations. We also believe the evaluation should include some cells that are irrigated with only drain water (no Salton Sea water mix) to evaluate selenium concentrations, track bioaccumulation and how that might affect individuals and overall species populations. This field experiment would help inform the selenium Ecological Risk Modeling reported in Appendix I.	Please refer to Master Response 7, Operations and Adaptive Management.
Imperial Irrigation District	IID-37	36. Page D-9, Section D.3.4 Residence Time: IID supports evaluating residence time in the SCH cells. Longer resident times could maintain habitat functional values, manage salinity and reduce pumping costs for replacement water. This might require a more intensive water quality monitoring program. IID suggests that residence time be tied to water quality or habitat quality instead of a set number of days. <i>See item no. 28.</i>	Please refer to Master Response 7, Operations and Adaptive Management.
Imperial	IID-38	37. Pages D-14 and D-15, Section D.4 Possible Operational Scenarios: IID would	Please refer to Master Response 7, Operations and Adaptive Management.

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Irrigation District		suggest reducing the lower limit on the salinity operational variable to 10 ppt or less in at least one cell to evaluate selenium concentrations and potential bioaccumulation. With a robust monitoring program any potential affects to wildlife could be identified early and the salinity range increased if required. Appendix I Selenium Management Strategies	
Imperial Irrigation District	IID-39	38. IID suggests that some fresh water (agricultural drain water) cells be incorporated into the SCH habitat to further evaluate the potential risks to wildlife associated with freshwater systems.	Please refer to Master Response 7, Operations and Adaptive Management.
Imperial Irrigation District	IID-40	39. IID lands with geothermal resources may not be available for this project.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Imperial Irrigation District	IID-41	40. The proponent may not use IID's canal or drain banks to access the project sites.	The SCH Project does not require the use of IID's canal or drain banks to access Project sites.
Imperial Irrigation District	IID-42	41. If any additional crossings or modification to the existing ones are needed, then the applicant will be responsible for the cost of these improvements and IID will design and construct them.	Such issues would be coordinated with IID as the Project design proceeds. No text revisions are required.
Imperial Irrigation District	IID-43	42. Fences should be installed at the boundary of IID's right-of-way for safety and allow access for IID operation and maintenance activities.	Such issues would be coordinated with IID as the Project design proceeds. No text revisions are required.
Imperial Irrigation District	IID-44	44. Any construction or operation on IID property or within its existing and proposed right of way or easements will require an encroachment permit, including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities. A copy of the encroachment permit application is included in the IID's <i>Developer Project Guide 2008</i> . The guide can be accessed at the following web site: http://www.iid.com/Modules/ShowDocument.aspx?documentid=2328 . Also, instructions for the completion of encroachment applications can be found at http://www.iid.com/Modules/ShowDocument.aspx?documentid=2335 . The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits.	The text has been modified as indicated in the comment.
Imperial Irrigation District	IID-45	45. Any new, relocated, upgraded or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction	New facilities known to be needed for the SCH Project were included in the impact analysis, although a new discussion of impacts of the power lines on birds was added to Section 3.4, and Section 3.1, Aesthetics (Impact AES-3) was clarified to indicate that Project facilities include power lines. Prior conversations with IID indicated that adequate power would be available to the Project and did

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		and/or upgrade of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully mitigated. Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent.	not raise the need for new substations. The design team will continue to coordinate with IID regarding the availability of 3-phase power lines that could accept the projected load. These power facilities are within the area of impact discussed in the Draft EIS/EIR. It is acknowledged that the Natural Resources Agency would be responsible for changes to IID facilities directly resulting from the SCH Project.
San Diego County Water Authority	SDCWA-1	On June 25, 2007, the California Resources Agency certified a Final Program Environmental Impact Report for the Salton Sea Ecosystem Restoration Program that identified a preferred alternative for restoring the Sea. The Water Authority participated as a member of the Advisory Committee that assisted in the preparation of the PEIR and preferred alternative. Disappointingly, the State has taken no further action to implement restoration despite repeated requests by various public agencies and other concerned organizations. The proposed SCH project is very similar to the Saline Habitat Complexes described in the Ecosystem Restoration Program FPEIR and provides the first meaningful State contribution to Sea restoration.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
San Diego County Water Authority	SDCWA-2	The Water Authority concurs with the two stated project goals: 1) develop a range of aquatic habitat that will support fish and wildlife species dependent on the Sea, and 2) develop and refine information needed to successfully manage the SCH through an adaptive management process. Because the SCH is intended to evaluate various approaches for shallow water habitat restoration, it is important that the project be designed and implemented to test multiple hypotheses related to water quantity/quality and establishing appropriate habitat for target species.	The SDCWA's support for the SCH Project's goals is noted.
San Diego County Water Authority	SDCWA-3	1. The selected alternative should be located to avoid areas with high potential for geothermal development. Maximum development of renewable energy sources is important to combating climate change and can be an important economic benefit to the Imperial Valley. Significant geothermal resources exist in and around the Sea. As the Sea recedes, renewable energy development along a newly exposed shoreline could help reduce wind-blown dust, thus lowering projected particulate emissions and preventing further air quality degradation.	Please refer to Master Response 8, Compatibility with Geothermal Development.
San Diego County Water Authority	SDCWA-4	2. The selected alternative should minimize adverse effects on existing agricultural lands, both during construction and long-term operation, to ensure minimal impacts to the local economy.	Please refer to the response to IID-6.
San Diego County Water Authority	SDCWA-5	3. The design and operation of the selected alternative should include elements that allow testing of various water quality parameters, such as salinity, temperature, dissolved oxygen, as well as chemical constituents such as selenium. An appropriate design would ensure that any potential relationships	Please refer to Master Response 7, Operations and Adaptive Management.

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		between physical, chemical and biological criteria could be evaluated.	
San Diego County Water Authority	SDCWA-6	4. The selected alternative should include elements to provide for desert pupfish connectivity. The dispersal routes for the various desert pupfish populations found in the New and Alamo Rivers and agricultural drains must be maintained.	Pupfish connectivity would be maintained by the interception ditch that would collect drain water and SCH seepage and convey the water to the Sea. The interception ditch would link the existing drains with the Sea to maintain connectivity.
San Diego County Water Authority	SDCWA-7	5. Final design of the selected alternative should account for the variability of water flows to the Sea expected in various models. The propose primary source of water for the SCH, agricultural drain flows, are highly variable and dependent on the amount and type of agricultural activity at any given time.	The flow of both the New and Alamo rivers is composed primarily of agricultural return flows (drainage flows). The variability of the drainage flows throughout the year is reflected in the flow pattern described for both rivers and illustrated in Figures 3.11-4 and 3.11-5. The proposed diversions are compared to these flows in Tables 3.11-8 and 3.11-9 and Figures 3.11-7 and 3.11-8 to display the relative impact of the Project on these variable return flows. In addition, the return flows are anticipated to decline in the future as crop patterns and applied water change. This is described in Section 3.11 and is incorporated in the impact assessment by using the PEIR CEQA Baseline for the assessment (refer also to the response to IID-24). No additional text revisions are required.
San Diego County Water Authority	SDCWA-8	6. The identified preferred alternative involves pumping rather than gravity flow. Additional detail on cost benefit should be included in the FEIR to justify this highly engineered and potentially costly solution. Less intensively managed systems (e.g., gravity flow systems) typically more easily approximate natural habitats. Permanent conversion of limited agricultural land for the sedimentation basins may be justified if it results in a substantial lifetime cost savings and provides a greater probability of achieving project goals.	Please refer to Master Response 5, Project Costs. Regarding the less intensively managed systems, the upstream sediment basins have problems that are more extensive than the conversion of agricultural land. Please see response to comment IID-30. Additionally, apart from environmental considerations, the development of a several-mile pipeline would potentially require easements from numerous landowners, which could cause extensive schedule delays, defeating the purpose of the project, and could potentially render the pipeline infeasible if willing owners were not available. No text revisions are required.
San Diego County Water Authority	SDCWA-9	7. The selected alternative should not adversely affect implementation of mitigation measures for the Quantification Settlement Agreement and Imperial Irrigation District Water Conservation and Transfer Projects. The Imperial Irrigation District, in partnership with the Water Authority and others, is currently implementing various mitigation measures approved as part of these projects. Close coordination with the Imperial Irrigation District may avoid conflict and identify opportunities for synergy between the projects.	This comment is noted. The SCH team will continue to coordinate with IID to avoid conflicts and look for opportunities for synergy. No text revisions are required.
Imperial County Air Pollution Control District	ICAPCD-1	1. The Draft EIR/EIS states that the project is intended to be funded under a legislative appropriation made pursuant to Fish and Game Code section 2932, subdivision (b). This law established the Salton Sea Restoration Fund for implementing the preferred alternative for restoring the Salton Sea. The Draft EIS/EIR needs to provide a full explanation of how this project affects and implements the Salton Sea restoration preferred alternatives identified by the Federal government, the State, and the Salton Sea Authority. Further, the Draft	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion. Fish and Game Code section 2932 establishes the Salton Sea Restoration Fund and lists how that fund can be spent. Section 2932.3 describes how a portion of the funds (the Proposition 84 funds) deposited into the Salton Sea Restoration Fund can be spent. Section 2932, subdivision (b) is quoted in the Draft EIS/EIR,

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		EIR/EIS misquotes Section 2932, subdivision b, which states: "Implementation of conversation measures necessary to protect the fish and wildlife species dependent on the Salton Sea, including adaptive management measurements pursuant to Section 2081.7". The omitted reference to Section 2081.7 is important because subdivision b is for the implementation of conservation measures for the invalidated Quantification Settlement Agreement (QSA). The Draft EIR/EIS fails to disclose how this project relates to the invalidated QSA and its relationship to the promised, but never completed, Salton Sea Habitat Conservation Strategy that was to mitigate impacts to 96 species.	page 1-4, lines 8-11. On February 11, 2010, the Sacramento County Superior Court issued a judgment in the QSA case. Enforcement of that judgment was stayed pending disposition of the appeal that was filed in the Third Appellate District. On December 7, 2011, the appellate court issued its ruling that reversed the trial court ruling and remanded the cases to the trial court for further proceedings. On June 4, 2013, the trial court issued its order upholding the validation of the QSA and related agreements. The QSA remains valid, pending other appeals or court rulings, if any.
Imperial County Air Pollution Control District	ICAPCD-2	2. Section 2081.7 also refers to the sale of the 800,000 acre feet of water, initially intended for delivery to the Salton Sea to mitigate impacts of the QSA, instead to Metropolitan Water District (MWD), and sale of yet an additional 800,000 acre feet (for a total of 1.6 million acre feet of water in addition to the other QSA water transfers from the Imperial Valley). DWR is responsible for any environmental impacts related to use or transfer of that water. On September 13, 2011, Imperial Irrigation District (110) adopted a resolution stating its intent to seek a modification to the SWRCB Order WRO 2002-0013 to cease delivering the Salton Sea's mitigation water, presumably to sell the water to MWD instead of delivering it to the Salton Sea as provided by Section 2081.7. According to its May 10, 2011 report, MWD expects to have a surplus of 1.07 maf of water this year and its water storage to be at an "all-time high" of 2.6 maf by the end of this year. If this project will facilitate in any way the transfer of the Salton Sea's mitigation water and/or the other 800,000 acre feet of water, then the project description is incorrect, and the impacts of the reductions in water inflow to the Salton Sea as a result of Section 2081.7 must be analyzed and further mitigation needs to be identified. There has never been a CEQA or NEPA analysis performed for the selling of this 1.6 million acre feet of water to MWD. These changes would be significant and require re-circulation of the draft document.	The sale of water referred to in Fish and Game Code section 2081.7 is not part of the proposed project, and therefore, the impacts from the sale of that water are not analyzed. Section 2.2.2 of the Draft EIS/EIR describes in detail how potential project components were developed, and how six conceptual action alternatives were developed. The alternatives development process is also described in Appendix B. No text revisions are required.
Imperial County Air Pollution Control District	ICAPCD-3	3. The "no action" alternative improperly assumes the landowners are entirely responsible for mitigating emissions from the exposed Salton Sea's shoreline between the pre-QSA baseline of -228 to -235 feet msl. A -7 foot msl difference results in approximately 16,000-acres of exposed area playa. This assumption ignores the contributions of the QSA to the declining Salton Sea elevation level. There is no explanation of the mitigation measures the project proponents expect the landowners to implement, how the measures will be funded, or how the project proponents intend to ensure the three landowners implement the measures. Since one of the project proponents is also one of the landowners (federal government), the Army Corps of Engineers should commit to implement the necessary air quality mitigation on federally-owned land.	The description of the No Action Alternative is based on the Salton Sea Ecosystem Restoration Program PEIR, which includes implementation of the QSA and its changes to inflows as part of the No Action scenario. The detail requested in this comment is not appropriate for a discussion of No Action, which is not the subject of the Draft EIS/EIR. Asking the Corps to commit to implementing the necessary air quality mitigation on federally owned land is not appropriate since the referenced impacts are not impacts of the SCH Project, which would have a beneficial impact on dust emissions (refer to Section 3.3, Air Quality, Impact AQ-2). No text revisions are required.

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Imperial County Air Pollution Control District	ICAPCD-4	4. The "no action" alternative wrongly assumes that the QSA and associated mitigation the parties agreed to as part of the QSA will be implemented, including that the QSA parties will mitigate air quality impacts between -235 and -248 feet msl. These assumptions are incorrect because the Sacramento Superior Court has invalidated 12 of the QSA contracts, and legal challenges to the IID-SDCWA water transfer EIR/EIS and QSA PEIR are pending in state court. The invalidation of the QSA Joint Powers Authority (QSA-JPA) contract also means that the QSA-related mitigation is unfunded and there is no assurance it will be implemented. Therefore, the reliance on the QAS and the QSA environmental documents results in this project's impacts being underestimated and insufficient mitigation required.	The No Action Alternative is intended to reflect existing conditions (those present at the time the Notice of Intent and Notice of Preparation were issued), plus changes that are reasonably expected to occur in the foreseeable future (Draft EIS/EIR, Section 2.3; CEQA Guidelines section 15126.6(e)(2)). On February 11, 2010, the Sacramento County Superior Court issued a judgment in the QSA case. Enforcement of that judgment was stayed pending disposition of the appeal that was filed in the Third Appellate District. On December 7, 2011, the appellate court issued its ruling that reversed the trial court ruling and remanded the cases to the trial court for further proceedings. On June 4, 2013, the trial court issued its order upholding the validation of the QSA and related agreements. The QSA remains valid, pending other appeals or court rulings, if any. The lead agencies have analyzed a No Action Alternative that addresses potential impacts if the project does not go forward, but the lead agencies are not required to speculate about the outcome of a legal process that could yield many different outcomes. No text revisions are required.
Imperial County Air Pollution Control District	ICAPCD-5	5. The Draft EIR/EIS assumes that air quality impacts will be mitigated by the four-step air quality mitigation that is in the IID-SDCWA water transfer EIR/EIS and to which the Air District has previously expressed to the State and QSA parties is inadequate, and which remains under legal challenge. The 4-Step Plan is an ill-defined "wish list" focused on studying the problem instead of committing to actual mitigation that will reduce air quality impacts. The mitigation also relies on the Air District's adoption of an air pollution credit trading program to generate PM10 ERCs that it has not agreed to do and without any assessment of the feasibility of such a program, impacts to the economy, or whether there are sufficient sources that could reduce emissions in lieu of reducing emissions at the Salton Sea.	This comment focuses on mitigation that would be implemented as part of the No Action Alternative. This is not mitigation that would be required as part of the SCH Project. No text revisions are required.
Imperial County Air Pollution Control District	ICAPCD-6	6. The Draft EIR/EIS adopts the flawed baseline approach from the QSA EIR/EIS and PEIR EIS assuming that the Sea will decline to -258.2 feet msl and its salinity will be 272 ppt. The baseline is the actual conditions at the time the notice of preparation is issued, which is reported in the Draft EIR/EIS to be -231 feet msl and 51 ppt salinity for the Salton Sea. The impacts are improperly measured from the -258.2 feet msl instead of -231 feet msl and from 272 ppt instead of 51 ppt. The California Supreme Court in <i>Cmtys. for a Better Env't v. S. Coast Air Quality Mgmt. Oist.</i> , (2010) 48 Cal.4th 310 has rejected the baseline approach used in this document because it misleads the public as to the reality of the impacts and subverts full consideration of the actual environmental impacts.	Please refer to Section 3.0.2, CEQA and NEPA Baselines. As indicated in this discussion, the analysis correctly compares impacts for CEQA purposes to the conditions existing at the time the Notice of Preparation was issued. It also compares impacts to the No Action Alternative in compliance with NEPA requirements. No text revisions are required.
Imperial County Air Pollution	ICAPCD-7	7. The Draft EIR/EIS states that the project will be operated until the end of the 75-year period covered by the QSA or until funding is no longer available. The project duration is uncertain because the QSA has been invalidated and without	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).

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Control District		a valid QSA-JPA there is no funding for the mitigation assumed in this document.	On February 11, 2010, the Sacramento County Superior Court issued a judgment in the QSA case. Enforcement of that judgment was stayed pending disposition of the appeal that was filed in the Third Appellate District. On December 7, 2011, the appellate court issued its ruling that reversed the trial court ruling and remanded the cases to the trial court for further proceedings. On June 4, 2013, the trial court issued its order upholding the validation of the QSA and related agreements. The QSA remains valid, pending other appeals or court rulings, if any. The lead agencies have analyzed a No Action Alternative that addresses potential impacts if the project does not go forward, but the lead agencies are not required to speculate about the outcome of a legal process that could yield many different outcomes.
Imperial County Air Pollution Control District	ICAPCD-8	1. (Executive Summary) ES1.9, line 3, pg ES-7 This sentence states, "Additionally, the Imperial County Air Pollution Control District would require preparation of a Fugitive Dust Control Plan under Regulation VIII, Fugitive Dust Rules (800-806)". The Air District would like to mention that a Dust Control Plan (DCP) must be developed for the construction phase. In addition, a second DCP must be developed for the operational phase.	The text has been modified as indicated in the comment.
Imperial County Air Pollution Control District	ICAPCD-9	2. (Introduction) Section -1.10 Required Permits and Consultations. line 23. pg 1-12 Same recommended changes as comment number 1.	The text has been modified as indicated in the comment.
Imperial County Air Pollution Control District	ICAPCD-10	3. (Alternatives) Section -2.4.2 Construction. line 1. pg 2-23 This section describes the construction process that would be necessary to construct the ponds as well as the equipment that will be required. It is important to note that equipment such as power generators, emergency generators, sandblasters, or other type of machinery with 50 horse-powers or greater requires an Air District permit, or must have a statewide PERP registration operated within PERP guidelines. Please contact the Air District Engineering Department for further assistance.	The text of the Executive Summary (page ES-7), Introduction (Section 1.10, Required Permits and Consultations), and Air Quality (Section 3.3.2.4, Portable Equipment Registration Program) has been revised to address this comment.
Imperial County Air Pollution Control District	ICAPCD-11	4. (Alternatives) Section 2.4.7 -Best Management Practices. line 24. pg 2-27 This sentence states "Additionally, the Project would comply with the Imperial County Air Pollution Control District's Regulation VIII rules for dust control (general requirements, construction and earthmoving activities, bulk materials, open areas, and conservation management practices), which is required for all projects". It is important to note that the project will also be subject to the requirements of Rule 803 -Carry-Out and Track-Out as well as Rule 805 -Paved and Unpaved Roads. These Rules are an integral part of Regulation VIII.	The text has been modified as indicated in the comment.
Imperial	ICAPCD-12	5. (Air Quality) Section 3.3.1 -Introduction. line 14. pg 3.3-1 This sentence	The text has been modified as indicated in the comment.

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County Air Pollution Control District		states, "ICAPCD oversees Calexico, Imperial County, and the Imperial Valley in the southeastern Basin, which is where the Project would be located". The Air District would like to point out that the agency oversees the entire geographical area within Imperial County and not just specifically Calexico, therefore it is requested that this change is made to this section.	
Imperial County Air Pollution Control District	ICAPCD-13	6. (Air Quality) Section 3.3.2.2 -Federal Regulations. lines 17 thru 20. pg 3.3-5 This sentence states, "As discussed in Section 3.3.4.5, Attainment Status Designations, Imperial County is designated moderate nonattainment for the Federal 8-hour O ₃ , NAAQS, while the Imperial Valley (which is the Salton Sea Air Basin's Imperial County portion) is designated as serious nonattainment area for 24-hour Federal PM ₁₀ and PM _{2.5} . While it is true that Imperial County is a serious non-attainment for PM ₁₀ it is not for PM _{2.5} .	The text has been modified as indicated in the comment.
Imperial County Air Pollution Control District	ICAPCD-14	7. (Air Quality) Section 3.3.2.4 -Portable Equipment Registration Program. line 32. pg 3.3-7 This sentence states, "Once registered in PERP, engines and equipment units may operate throughout the state of California without the need to obtain individual permits from local air districts". The Air District would like to point out that although this statement is correct, the engine is not considered portable if it resides in the same location for more than 12 months. This also means that any engine such as a back-up or stand-by engine, that replaces engine(s) at a location, and is intended to perform the same or similar function as the engine(s) being replaced, will be included in calculating the consecutive time period. Therefore, if the construction phase does take over a year and the equipment is expected to be at the site for over a year. the equipment must be permitted by the Air District.	The text has been modified as indicated in the comment.
Imperial County Air Pollution Control District	ICAPCD-15	8. (Air Quality) Section 3.3.3.5 -Attainment Status Designations. line 7 thru 10. pg 3.3-17 This sentence states, "As part of USEPA's final ruling, a Reasonably Available Control Technology (RACT) demonstration was also required. RACT's are emission control technologies that are economically and technically feasible. In compliance with the requirements, ICAPCD released the 2009 Reasonable Available Control Technology (RACT) State Implementation Plan" The Air District must clarify that the RACT SIP was developed as part of the Ozone Attainment demonstration and has nothing to do with US.EPA's PM ₁₀ Serious Non-Attainment Designation therefore this section has to be either revised or deleted.	The text has been modified as indicated in the comment.
Imperial County Air Pollution Control District	ICAPCD-16	9. (Air Quality) Section 3.3.3.5 -Attainment Status Designations. line 28 thru 30. pg. 3.3-17 This section states: "In August 2009, ICAPCD released the 2009 Imperial County State Implementation Plan for Particulate Matter Less than 10 Microns in Aerodynamic Diameter (ICAPCD 2009). This document presents the SIP for PM ₁₀ on ICAPCD's behalf. It is important to note that the PM ₁₀ SIP has	The text has been modified as indicated in the comment.

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		yet to be approved by the California Air Resources Board (CARB) or US.EPA.	
Imperial County Air Pollution Control District	ICAPCD-17	10. (Air Quality) Section 3.3.4.1-Impact Analysis Methodology. line 12 thru 14. pg. 3.3-20 This sentence states, "Extending the schedule longer than 2 years would not affect the air quality analysis because it is based on maximum daily emissions (pounds per day) and total emissions (tons), which would remain relatively unchanged". The Air District believes this statement needs further clarification for the following reasons. If construction is delayed for an unknown reason and construction equipment usage and activities stop completely, then there are no emissions being created. However, once construction resumes, construction equipment usage and activities must not go over the daily proposed equipment usage scheduled or activity scheduled that is used in this analysis to calculate daily emissions, otherwise this would increase the daily emissions. Furthermore, if an unforeseen problem with soil movement or any other construction activity was to occur prompting an increase in the construction fleet mix or related construction activities for any day, it would also increase the daily emission production. The construction manager should ensure that this does not occur by off-setting the usage of other construction equipment or activities on those days. This comment must be addressed in this section as well as any other section(s) in the EIS/EIR.	The air quality analysis was based on the best information available regarding equipment usage, although it also is conservative, assuming that most equipment would operate 8 hours a day, although dredges could operate up to 20 hours a day. There is currently no reason to assume that construction would be delayed; however, if it were, there is also no reason to assume that the equipment mix and hours of usage would be different than analyzed. For example, under State contracting guidelines, overtime would only be allowed if it were specifically built into the contract, and given budget constraints, it is unlikely that this would occur. Thus, a changed construction scenario is speculative and does not require analysis. No text revisions are required.
Imperial County Air Pollution Control District	ICAPCD-18	11. (Air Quality) Section 3.3.4.5 -Alternative 1-New River. Gravity Diversion + Cascading Ponds. line 28 thru 30. This sentence states "Peak daily NOx and fugitive PM ₁₀ emissions from on and off-site sources during construction would exceed ICAPCD's thresholds, which would be a significant impact when compared to both the existing environmental setting and the No Action Alternative". Although this statement is referring to Alternative 1, the Air District noticed that the Preferred Alternative (Alternative 3) also exceeds the NOx and PM ₁₀ Air District thresholds. Therefore in order to help reduce or eliminate construction impacts, the project is required to implement standard, discretionary and enhanced mitigation measures for construction equipment and fugitive PM ₁₀ . These measures are found in Section 7.1 of the Air District's CEQA Air Quality Handbook. Furthermore, the project will also be subject to the Air District's Policy 5 which requires the mitigation of NOx and PM ₁₀ emissions exceeding the CEQA threshold. Attached is a copy of the Air District's Policy 5 for your review.	The referenced text was modified to address this comment.
Imperial County Air Pollution Control District	ICAPCD-19	12. (Air Quality) Section 3.3.4.5 -Alternative 1 -New River, Gravity Diversion + Cascading Ponds, line 8, pg 33-34 This sentences states, Water exposed soil with adequate frequency for continued moist soil (at least twice daily and indicated by soil and air conditions). The Air District would like to clarify that Rule 801-Construction and Earthmoving Activities, requires the application of water or chemical stabilization at the sites to limit Visible Dust Emissions (VDE) to 20%	The referenced text was modified to address this comment.

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		opacity at all times, therefore watering more than twice a day may be necessary to not exceed the opacity limit.													
Imperial County Air Pollution Control District	ICAPCD-20	13. (Air Quality) Section 3.3.5 -General Conformity, line 35 thru 37, pg. 3.3-39 This sentence states, "Imperial County is designated nonattainment for the Federal 8-hour ozone NAAQS, while the Imperial Valley (which is the Salton Sea Air Basin's Imperial County portion) is designated as nonattainment area for 24-hour Federal PM ₁₀ and PM _{2.5} . The Air District would like to clarify that the Imperial County is currently classified as a "moderate" non- attainment area of the 1997 8-hour Ozone NAAQS. The Imperial County is designated as "serious" non-attainment area for PM ₁₀ and non-attainment for PM _{2.5} .	The referenced text was modified to address this comment.												
Imperial County Air Pollution Control District	ICAPCD-21	14. (Air Quality) Section 3.3.5 -General Conformity, line 20, pg. 3.3-40 The word "revision" should be changed to "revising".	The referenced text was modified to address this comment.												
Imperial County Air Pollution Control District	ICAPCD-22	15. (Air Quality) Section 3.3.5 -General Conformity, line 4 thru 6, pg. 3.3-43 This paragraph states, "Ozone is tentatively in attainment pending certification of 2008 monitoring data, until any future USEPA determination to the contrary". The Air District would like to clarify that all Ozone data up to 2010 has been validated and US.EPA had determined that the Imperial County has and continues to attain the 1997 8-hour NAAQS for Ozone.	The referenced text was modified to address this comment.												
Imperial County Air Pollution Control District	ICAPCD-23	16. (Air Quality/Greenhouse Gases Documentation) Appendix G-2, Table G-3 Please explain why the proposed equipment list only accounts for 1 (one) water truck for the construction phase of this project. If the project is intended to take place in over 3,770 acres and as per the analysis, watering will take place at a minimum of twice per day, it is difficult to suppose one water truck will be able to accomplish such task. In addition, please explain why the manager trip/day is only .5 and the foreman, equipment operator and laborers at .33 per/day.	The entire Project site would not require watering throughout construction; instead, watering would only be required at the immediate construction area, and this could be handled with a single truck. The trips referenced in the comment assume that workers would carpool. As discussed in Section 2.4.7, Best Management Practices, the Project would implement a number of measures to reduce emissions from fuel combustion and work activities, including promoting riding sharing among construction workers or providing shuttle service to the Project site. No text revisions are required.												
Imperial County Air Pollution Control District	ICAPCD-24	17. (Air Quality/Greenhouse Gases Documentation) Appendix G-2, Table G-10 and Table G-12 The Air District noticed that a 95% emission reduction control is being applied to the Off-road Dust Emissions as well as Maintenance Off-road Dust. Please explain where the emission reduction factor derived from. The analysis indicates that water will be applied at a minimum of twice per day in the construction area however this does not constitute a 95% reduction. As per AP42, Section 13.2.2 Unpaved Roads, application of water emissions reductions thru watering requires the evaluation of several factors (e.g. vehicle weight, temperature, ground moisture content) and therefore such an evaluation must be completed before applying such emission reduction.	<p>The 95 percent emission reduction was obtained from AP-42, Figure 13.2.2-2, where achieving a soil moisture content of 20 percent correlates to a 95 percent reduction (see below).</p> <table border="1"><tr><th colspan="3">AP-42 Figure 13.2.2-2</th></tr><tr><th colspan="2">Moisture (M)</th><th>Control</th></tr><tr><th>percent</th><th>ratio</th><th>%</th></tr><tr><td>20</td><td>5.00</td><td>95.00%</td></tr></table> <p>In addition to percent moisture content (M), the following variables are</p>	AP-42 Figure 13.2.2-2			Moisture (M)		Control	percent	ratio	%	20	5.00	95.00%
AP-42 Figure 13.2.2-2															
Moisture (M)		Control													
percent	ratio	%													
20	5.00	95.00%													

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			<p>incorporated into to the emission estimation technique (EET Code G) for unpaved road dust per AP-42 Section 13.2.2:</p> <p>s = silt content, percent</p> <p style="padding-left: 40px;">9 percent average geometric mean (from AP-42 Tables 11.9-3; 13.2.2-1; 13.2.4-1)</p> <p>W = average vehicle weight</p> <p style="padding-left: 40px;">Light Duty = 3 tons average (loaded)</p> <p style="padding-left: 40px;">Medium Duty = 8 tons average (loaded)</p> <p style="padding-left: 40px;">Heavy Duty = 30 tons average (loaded 40 tons, unloaded 20 tons)</p> <p>S = mean vehicle speed</p> <p style="padding-left: 40px;">5 mph for watering trucks</p> <p style="padding-left: 40px;">20 mph for graded dirt/gravel roads (watered)</p> <p>P = Number of wet days over 0.01 in precipitation for averaging period (from AP-42 Figure 13.2.1-2)</p> <p style="padding-left: 40px;">P = 20 days/year for Low Deserts</p> <p style="padding-left: 40px;">Precipitation correction (PC) = (365-P)/365 for annual average</p> <p style="padding-left: 40px;">Note: precipitation correction not used (PC = 1) for worst case day calculations</p> <p>Therefore, the unpaved road dust EET does take into account the variables of vehicle weight, temperature (season), and ground moisture content. The EET also incorporates variables for soil silt content, vehicle speed, and annual rainy days.</p> <p>Note that MM AQ-1: Implement fugitive PM₁₀ control measures includes the following :</p> <ul style="list-style-type: none"> ▪ Water exposed soil with adequate frequency for continued moist soil so that visible dust emissions would be limited to 20 percent opacity for dust emissions at all times (as indicated by soil and air conditions). <p>Note also that the best management practices included as part of the project description in Section 2.4.7, includes the following:</p> <ul style="list-style-type: none"> ▪ Additionally, the Project would comply with the Imperial County Air Pollution Control District's Regulation VIII rules for dust control (general requirements, construction and earthmoving activities, bulk materials, open areas, and conservation management practices), which are required for all projects. <p>The construction phase Dust Control Plan would require water to be applied as often as necessary to unpaved roads used by the Project, two or more time per</p>

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			day, to maintain sufficient moisture to nearly eliminate fugitive dust generation from vehicle traffic and to limit visible dust emissions to 20 percent opacity. Since construction is planned during the hottest months of the year, the frequency of water application would be increased as needed. No text revisions are required.
Imperial County Air Pollution Control District	ICAPCD-25	In Summary, all standard mitigation measures and discretionary mitigation measures for fugitive PM ₁₀ emissions. Both standard mitigation and enhanced measures for construction combustion equipment should be applied as well. The project will also be subject to Policy #5 to mitigate the NO _x and PM ₁₀ emissions above the Air District's CEQA threshold.	The referenced text was modified to address this comment. Note that mitigation measures MM AQ-1 and MM AQ-2 would be implemented by the SCH Project in addition to those measures that are required for all projects by the ICAPCD (refer to page 3.3-34, lines 15-16).
Imperial County Air Pollution Control District	ICAPCD-26	In Closing, please provide the revised or additional analysis based on the comments above for the APCD to review.	The responses to comments and revised text will be provided to the Imperial County Air Pollution Control District at least 10 days before the Final EIR is certified by the California Natural Resources Agency.
Salton Sea Authority	SSA-1	The Salton Sea Authority appreciates the opportunity to review the Draft EIR for the Species Conservation Habitat (SCH). We applaud the State for moving forward with this project and we support the overall goals of the program. The EIR presents a careful analysis of the issues and a reasonable set of alternatives.	The Salton Sea Authority's support of the project is noted.
Salton Sea Authority	SSA-2	1. Non-Interference with Agricultural Drainage. Final designs should be coordinated with IID to avoid interference with agricultural drainage.	The Project team will continue coordinating with IID to avoid interference with agricultural drainage. No text revisions are required.
Salton Sea Authority	SSA-3	2. Ownership and Easements. Likewise, land ownership and easement issues need to be coordinated with IID.	The Project team will continue coordinating with IID regarding land ownership and easement issues. No text revisions are required.
Salton Sea Authority	SSA-4	3. Known Geothermal Resource Area (KGRA). The Authority is concerned that some of the alternatives may cause interference with access to geothermal resources. Based on our understanding of the location of the KGRA, we believe the alternative areas west of the mouth New River would be acceptable and would not interfere with potential future geothermal energy production. In areas where the footprints of the alternatives overlay the KGRA, access for geothermal energy production should be considered and may be needed as a mitigation for potential loss of an energy resource if access is not allowed.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Salton Sea Authority	SSA-5	4. Selenium and Freshwater Habitats. Selenium data presented in Appendix I suggests that there is only a slight difference between the selenium levels in the south end of the Sea and those in the New River. In fact, the Amrhein and Smith (2011) data from 2010 shows a mean selenium level in the New River of 1.8 µg/L compared the mean level in the Salton Sea near shore area of 2.46 µg/L.	The differences in the slightly lower selenium levels measured by Amrhein and Smith ([2011], based on one-time measurement in summer 2010) compared to values measured by Reclamation (C. Holdren, USBR, unpublished data) and USGS (Miles et al. 2009) are recognized. The Reclamation and USGS datasets were relied upon because the values were fairly consistent over a longer time period (Reclamation measured quarterly 2004-2010, USGS measured twice a

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			year Fall 2006-Fall 2008) and are considered appropriate data sources. The impact analysis is conservative and adequate. No text revisions are required.
Salton Sea Authority	SSA-6	4. Selenium and Freshwater Habitats. The Salton Sea Authority recommends that the State consider having at least some freshwater cells in the SCH design. This would provide an excellent opportunity for further research on freshwater habitats in the area. Considering the potential expenditure on this project, it would be a great loss of opportunity not to include some freshwater habitat.	Please refer to Master Response 7, Operations and Adaptive Management.
Salton Sea Authority	SSA-7	5. Flow Rates and Residence Times. The flow rates for various residence times presented on page 3.11-22 and on Table 3.11-7 on pages 3.11-23 and 3.11-24 are very high. An example is discussed in the text on page 3.11-22 for Alternative 3 (the State's preferred alternative) with a target salinity of 20 ppt and a residence time of two weeks. To achieve these conditions, a flow rate from the New River of 313 cfs (202 MGD or 227,000 AFY) would be required and 163 cfs (105 MGD or 118,000 AFY) of salt water would need to be pumped from the Sea. What will happen if the flows in the river cannot support these large withdrawals? How will the flow in the river be affected by such large diversions?	<p>The residence time is the amount of time needed to turn over the water stored in the ponds. The diversion rate was calculated as the storage volume divided by the residence time. The total diversion rate is the diversion rate needed to turn over the pond plus the amount of water needed to replace evaporation losses.</p> <p>If the flow in the river is not sufficient to support a given discharge, then the adaptive management plan would allow pond conditions to change in response to the available water; additionally, Section 2.4.1.7 was modified to indicate that while the available water supplies currently appear to be adequate to supply the SCH ponds as proposed, the size of the ponds could be reduced in the future if available water supplies were reduced.</p> <p>The impact analysis, however, considered that flows would decrease in the future because of reduced drain water. In addition, under Alternative 3, the diversion would occur at the downstream end of the irrigated agriculture, and the water would be returned about 1 mile downstream at the river mouth. Under this alternative, the reduction in flow because of the diversion would occur in a levied section of New River that flows through the Sea. Revisions to Section 3.4.4.4, Alternative 1 discuss effects of reduced flow in that section of the river on biological resources. No downstream users along the river are present, let alone affected.</p>
Salton Sea Authority	SSA-8	In 2005, the Salton Sea Authority developed cost estimates for low head pumping stations using Bureau of Reclamation costs factors. Based on these factors in 2005 dollars, a 200 MGD pumping plant could cost about \$8 million and have annual operating, maintenance, energy and repair (OMER) costs of \$440,000. A 100 MGD pumping station could cost about \$5 million and have annual OMER of \$370,000. Therefore, in 2005 dollars, the combined cost for pumping is estimated at \$13 million in capital cost and \$810,000 in annual OMER. Even with the longest residence times, the Authority believes the two pumping stations could have a combined cost of \$5 million and annual OMER costs of over \$500,000.	<p>The costs associated with delivering water to the Project site and maintaining a water surface elevation of -228 would be substantial for either pumping or gravity-flow options. The pumping alternatives would have costs associated with the capital cost of the pumps and electrical connection and O&M costs associated with energy and pump maintenance. The gravity diversion would have capital costs associated with constructing the pipeline (excavation, pipe, repair of drains, land acquisition for the sedimentation basin, and easements) and operations and maintenance costs associated with clearing sediment, and repairing local drainage facilities. The costs developed by SSA, like the costs developed for this EIS/EIR, are preliminary and subject to refinement as more information is available.</p> <p>The refined project costs would be developed during the final design, and the Project would be scaled according to the available funds; thus, cost would not</p>

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			render this aspect of the Project infeasible. Previous work performed by Reclamation and others would be considered, in addition to the current capital costs for physical features used in the SCH Project. The Salton Sea Authority's comment will be considered by decision makers, but the developed costs are sufficient for analysis in this EIS/EIR. No text revisions are required.
Salton Sea Authority	SSA-9	The Salton Sea Authority suggests that the gravity flow system would be better to avoid large capital and OMER costs. In addition it may be possible to have salt water mix in the lower cells by gravity using a gates that could be opened and closed as needed or by using porous dikes.	The Salton Sea Authority's opinion regarding gravity flow is noted (refer to the response to SSA-8). Gravity flow was analyzed, and impacts were presented in the Draft EIS/EIR; alternatives using this feature were eliminated from consideration as the State's preferred alternative for the reasons described in Section 7, Summary Comparison of Alternatives. The final design would consider all relevant project features considered in the Draft EIS/EIR. As currently proposed, gravity-controlled water control structures would connect the ponds with each other and the Sea (Figures 2-3 and 2-4). No text revisions are required.
Salton Sea Authority	SSA-10	If the system requires large annual OMER outlays, how will they be funded? Will a fund be established to continue OMER funding in perpetuity?	Please refer to Master Response 4, Project Funding.
Salton Sea Authority	SSA-11	6. Budget. Please provide the latest budget estimate for the project.	Please refer to Master Response 5, Project Costs.
Salton Sea Authority	SSA-12	While the Salton Sea Authority appreciates that the State is moving forward with the SCH Project, we remain concerned that there seems to be little progress toward a larger solution for the Sea.	This comment is noted; concerns regarding the progress toward a larger solution for the Sea do not address the issues discussed in the SCH Project's Draft EIS/EIR, and no text revisions are required. Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Salton Sea Authority	SSA-13	In addition, we are frustrated by the slow pace that the State is taking in the Financial Assistance Program which has been presented at several stakeholder meetings and continues to run behind each schedule that has been presented.	This is a comment on the Financial Assistance Program, not the SCH Project Draft EIS/EIR. The State presented the draft Financial Assistance Program Guidelines to stakeholders and other interested parties in early January. Progress on finalizing the draft Guidelines has been frustrated by staffing changes. No text revisions are required.
County of Imperial Board of Supervisors	ICBOS-1	As you may be aware, Imperial County is the second-largest geothermal energy producing county in the nation. This industry sector is a vitally important part of our economy and provides hundreds of well-paying jobs and other economic benefits to our county and its residents. Furthermore, it is generally recognized that our county and the Salton Sea area in particular, is the location of the largest known undeveloped geothermal resource in the nation. As California moves forward aggressively to meet its renewable energy targets in the coming years,	Please refer to Master Response 8, Compatibility with Geothermal Development.

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		we anticipate that additional geothermal production facilities will be constructed, providing even more jobs and benefits to our area and the state. We therefore view with some anxiety, any proposal that might threaten the ability of geothermal industry to fully access the vital resources located within in this area.	
County of Imperial Board of Supervisors	ICBOS-2	As can be readily discerned from the attached map, the project boundaries for all six alternatives identified in the DEIS/R lie either entirely or partially within the Salton Sea Known Geothermal Resource Area (KGRA) as established by the State of California Department of Conservation Division of Oil, Gas and Geothermal Resources (DOGGR). In fact, Alternatives 4, 5 & 6 overlies a part of the KGRA that is suspected of being one of the most promising locations for future development. We therefore strongly oppose any future consideration of Alternatives 4, 5 or 6 as the location for the SCH project.	Please refer to Master Response 8, Compatibility with Geothermal Development.
County of Imperial Board of Supervisors	ICBOS-3	The other sites (Alternatives 1, 2 & 3) though less problematic, still contain significant potential for conflict with geothermal activity, especially in the area north and east of the mouth of the New River. We understand that the construction of the SCH is proposed to be completed in phases over a several year period. We therefore recommend that any construction phasing of Alternatives 1, 2, or 3 be accomplished in a manner to avoid that area east of the river until such time in the future when further exploration and analysis of the potential for geothermal development in that area can be more fully assessed. Additionally, specific provisions and/or easements to accommodate geothermal activity should be developed prior to the implementation of any of the alternatives being considered. The County believes that geothermal development and habitat creation can be compatible if both are considered equally in the development of the SCH project.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Coachella Valley Water District	CVWD-1	1. There are at least two competing alternatives for the overall restoration of the Salton Sea. There were separate plans that were developed by the State of California and the Salton Sea Authority. The Legislature of the State of California has not acted to select a preferred alternative. CVWD supports the Salton Sea Authority's plan. The proposed SCH Project is characterized in the DEIS/DEIR as a stand-alone project with two stated goals: 1) develop a range of aquatic habitats that will support fish and wildlife species dependent on the Salton Sea; and 2) develop and refine information needed to successfully manage the SCH Project habitat through an adaptive management process. However, on the State of California, Department of Water Resources website it states: <i>"The release of this study is an important step in a phased approach to ecosystem restoration in the Salton Sea," said Secretary for Natural Resources, John Laird "This early start habitat will help maintain necessary habitat for the wildlife in the Salton Sea and will complement future restoration efforts."</i>	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.

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		<p>That statement seems to indicate that Secretary Laird sees this project as the Early Start Habitat project described in the State Plan.</p> <p>It appears that the State may be circumventing the Legislature by beginning implementation of the State Plan for the restoration of the Salton Sea without proper public discourse; the DEIS/DEIR is presenting a portion of a larger project in a piece-meal fashion that appears to conflict with environmental law.</p>	
Coachella Valley Water District	CVWD-2	<p>2. On September 13, 2011, the Imperial Irrigation District (IID) Board resolved to ask the California State Water Resources Control Board (SWRCB) to allow it to stop putting Quantification Settlement Agreement (QSA) mitigation water into the Salton Sea, thereby setting the stage to sell nearly 400,000 or 500,000 acre-feet of additional water to coastal communities. How would that action affect the proposed SCH project, either positively or negatively, as Secretary Laird described this project, not as species conservation habitat, but as Early Start habitat? How would that action affect any future projects, positively or negatively?</p>	Please refer to the response to ICAPCD-2.
Coachella Valley Water District	CVWD-3	<p>3. The DEIS/DEIR describes a project that will have operation and maintenance requirements after completion of construction, as well as, adaptive management requirements. Although not stated in the DEIS/DEIR, it has been stated in public meetings and on the State of California, Department of Water Resources website that construction of this project is to use Proposition 84 (Chapter 5) funding, and the ongoing maintenance and adaptive management would be funded using the Salton Sea Mitigation Fund consisting of funds paid by the water agencies pursuant to the requirements of the QSA.</p> <p>This appears to indicate that the State is planning to use a finite revenue stream (the QSA-based Salton Sea Mitigation Fund) to fund infinite, ongoing operations, maintenance and adaptive management. Once these funds are expended, this appears to place obligations on the State similar to the obligations the State assumed under the QSA, causing the QSA to be deemed unconstitutional.</p>	Please refer to Master Response 4, Project Funding.
Coachella Valley Water District	CVWD-4	<p>4. Section 3.4: DEIS/DEIR states that SCH Project is designed to support fish species that provide a forage base for piscivorous birds and that the fish proposed for introduction to the SCH are currently, or have in the recent past, been introduced to the Salton Sea. It is well known that the desert pupfish (<i>Cyprinadan macularius</i>), a southwestern species whose original range in portions of Arizona, California, and northern Mexico, has been greatly curtailed by proliferation of non-native fish species. CVWD is concerned that the fish species known to impair desert pupfish survival is being considered as the forage base in the SCH Project. Several researchers (e.g., Schoenherr, 1981x; Steinhart, 1990; Moyle, 2002) have suggested predation on eggs, juveniles, and adults, and competition for food and space as possible ways that the hybrid Mozambique tilapia (<i>Oreochromis mossambica</i> by <i>O. uroleris</i>), redbelly tilapia</p>	Please refer to Master Response 1, Selected Fish Species.

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		<i>(Tilapia zillii)</i> , sailfin molly (<i>Poecilia latipinna</i>), and other non-native species can adversely affect populations of desert pupfish.	
Coachella Valley Water District	CVWD-5	The project should consider the use of Striped Mullet (<i>Mugil cephalus linnaeus</i>). This species has been associated with the Salton Sea on and off since the formation of the sea. They were also stocked in the Salton Sea in the late 1940's and 1950's. This species is not known for predating on desert pupfish, its eggs or the fry; however, it is a detritus eater and may compete with the pupfish on that scale. These mullet are tolerant of high salinity water and freshwater alike, form large schools in shallow water and were typically found at the mouths of the Alamo and New Rivers. They are a prime forage fish for piscivorous birds and may be a more appropriate species to consider for the SCH Project.	Please refer to Master Response 1, Selected Fish Species.
Coachella Valley Water District	CVWD-6	5. Section 3.11.2.1: This paragraph describes water rights held by IID and Metropolitan Water District of Southern California for diversions from Salton Sea tributaries, but fails to identify similar diversion water rights held by CVWD. CVWD maintains water rights for diversions from Salton Sea tributaries which include appropriative rights described in SWRCB Permit Nos. 536 and 3011. In addition, CVWD maintains appropriative water rights for Colorado River water covered by SWRCB Permit No. 7650 and used to irrigate lands within CVWD's irrigation service area and has submitted a water right application to divert agricultural return flows from the Coachella Valley Storm water Channel and agricultural drains tributary to the Salton Sea.	The referenced section only addresses those water rights that have a direct bearing on the SCH alternatives considered in detail in the Draft EIS/EIR. These alternatives do not require the use of water for which CVWD maintains water rights. No text revisions are required.
Coachella Valley Water District	CVWD-7	6. Tables 3.11-8 and 3.11-9. These tables provide values representing the percentage of the New River and Alamo River flows needed to supply the SCH to meet several alternative salinity targets and pond residence times. While not stated in the DEIS/DEIR, it appears these percentages are based on historical flows measured at USGS gages for the periods 1944-2010 and 1960-2010 for the New River and Alamo River, respectively. CVWD is concerned that these historical measurements may not provide an accurate representation of future flows in the New River and Alamo River and may underestimate the impact of diversions needed for the proposed SCH.	The comparisons found in Tables 3.11-8 and 3.11-9 were based on the historic average flows in the rivers. In the future, as agricultural drainage continues to decline, the diversion as a percentage of river flow will increase. As seen in these tables, the diversion percentage that was analyzed varies from less than 5 percent to about 50 percent, depending on the residence time and the salinity of the pond. The operations and adaptive management plans would manage the diversion and modify operations as appropriate to remain in the range discussed in the Draft EIS/EIR. No text revisions are required.
Coachella Valley Water District	CVWD-8	7. SCH project costs. CVWD is unable to locate a summary of the projected SCH costs in the DEIS/DEIR. Estimates for both the total capital costs and annualized operations and maintenance costs per acre would be useful for evaluating the impact of the proposed SCH project.	Please refer to Master Response 5, Project Costs.
Organizations/Corporations			
Solar Power & Water	SP&W-1-1	We, Solar Power & Water Inc. submitted a plan to the Secretary of the Interior, the Commissioner of Reclamation, the Chairman of California Water Resources,	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.

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		and the California Financial Office. http://www.solarpowerandwater.com/assets/Salton%20plan2%20and%20opinion%20s.pdf If you are not thoroughly versed in our plan, shame on you. Our plan would maintain the Salton Sea full size at 228 feet below sea level. In so doing, the proposed SCH ponds would all be flooded. Our plan might also lead to the elimination of the QSA. The SCH is dependent on funding; our produces income, and is better in all respects. Study it and learn why.	
Solar Power & Water	SP&W-1-2	Far superior than any of your six alternatives is the plan by Solar Power&Water Inc. to remediate the entire Sea. See http://www.solarpowerandwater.com/assets/Salton%20plan2%20and%20opinion%20s.pdf	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Imperial County Farm Bureau	ICFB-1	A lack of O&M costs being reported or costs to construct the various projects are a major concern to the Imperial County Farm Bureau.	Please refer to Master Response 5, Project Costs.
Imperial County Farm Bureau	ICFB-2	Are the fish grown in the acreage of ponds sufficient to feed all the fish eating birds, in particular, the cormorants? Have you studied yield in pounds per acre of fish and possible pounds of fish that could be consumed by the bird population?	The goal of the SCH project is to partially offset habitat losses, but it cannot fully replace that habitat, nor do the project goals make that guarantee. As discussed in Section 3.4.4.4, Impact BIO-5C, the number of fish expected would be considerably less than the Sea currently provides and therefore would support a smaller population of piscivorous fish. No attempt has been made to calculate fish yield of the ponds. This would be monitored as part of the adaptive management of the ponds. No text revisions are required.
Imperial County Farm Bureau	ICFB-3	High concentrations of birds in the ponds may lead to the higher bird populations in the vicinity of nearby Willey Reservoir, using that reservoir for loafing and fresh water. Their feces could very well increase the E. coli counts in the irrigation water to the point where leafy green vegetables could not be used for irrigation. A very high proportion of the acres around the New River produce leafy green vegetables as well as broccoli, cauliflower, celery, melons, and sweet corn because of the warm micro-climate created by the Salton Sea. 15% to as high as 35% of the water used to grow these crops is pumped from the Willey Reservoir and mixed with water of Vail Main canal. The threat of E. coli counts in the irrigation water as a result of this project directly affects agriculture and must be mitigated.	As discussed in Section 3.19, Socioeconomics (Impact SOC-7), the concentration of birds near the SCH Project ponds is not expected to increase beyond current levels. Thus, E. coli counts in irrigation water are not expected to increase as a result of the SCH Project, and no text revisions are required.
Imperial County Farm Bureau	ICFB-4	1. Available Water Rights Does the State have a water right or the right to take the water from the New or Alamo Rivers for this project? MWD has filed for the rights to use the water. Will this all end up being a MWD project with MWD getting mitigation credits and trading the New and Alamo River water for	Please refer to Master Response 6, Water Rights.

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		Colorado River water? Will the state have to buy this water from MWD?	
Imperial County Farm Bureau	ICFB-5	2. Available Land Have there been any discussions with IID regarding the use of their land for this project? Will the land be leased on a long term basis or purchased? How will IID be indemnified from damage, loss, or injury as a result of this project? Who will be liable for any damages caused by the project, particularly if the project is a long term lease from IID? These are important issues that need further clarification.	As discussed in Section 2.4.1.27, the land where the SCH ponds would be located is owned by IID and would be leased from IID for the Project's duration, with the exception of the land at the Wister Beach SCH pond, which is owned by a number of private parties. The issues raised in this comment regarding indemnification and liability will continue to be coordinated with IID as part of the lease; these are not environmental issues that require analysis in the EIS/EIR. The Natural Resources Agency would be the project owner and would be responsible for any damage that may result from this project. No text revisions are required.
Imperial County Farm Bureau	ICFB-6	3. Adequate Water Supply There appears to be an adequate water supply for the near future, however in 25 years flows from the Alamo and New Rivers will be diminished considerably and the amount of brackish water needed for projects of this size many not be available. Recent discussions by participants of the Imperial Integrated Regional Water Management Plan have suggested IID drain water might be used for cooling purposes for future geothermal plants. This could affect the quantity of water ultimately flowing to the Salton Sea in the New and Alamo Rivers.	Please refer to the response to SSA-7 for a discussion of future water supplies. It is assumed that IID would evaluate future requests for drain water supplies in the context of the diversions necessary for the SCH Project. (Please refer to comment IID-1, which expresses IID's support for the SCH Project.) No text revisions are required.
Imperial County Farm Bureau	ICFB-7	2.3.1 Actions that Could Affect Inflows to the Salton Sea Metropolitan Water District's attempt at appropriating the New and Alamo River waters may certainly affect this project including the consequences it would have on the project and IID should they decide to continue with their appropriation claims.	Please refer to Master Response 6, Water Rights.
Imperial County Farm Bureau	ICFB-8	Page 2-9 Line 12 states that: "the average inflow to the Salton Sea will average 900,000 acre feet until 2078" . The Imperial County Farm Bureau believes this assumption is flawed. This assumption assumes past history can be used to predict future inflows and does not take into consideration the changes in farming methods that will conserve water in the future including the change in cropping patterns and methods of irrigation. Inflows have already shown a rapid decline since the 2002 when the QSA was signed. According to information furnished by IID, the average four year inflow to the Salton Sea from 2002-2005 was 1,148,957 acre feet per year. The average four year inflow from 2007-2010 was 1,077,172 acre feet per year which is an average of 71,785 acre feet less per year. This includes an average of 38,062 acre feet of mitigation water being delivered to the Salton Sea per year between 2007 and 2010. During the next 25 years farmers will be tasked with finding new ways to conserve water while still providing the crops with their necessary water demand. Farm practices are already changing with more acres being irrigated every year	The figure was taken from Table H2-5 of the PEIR and reflects the total estimated inflow to the Sea from all sources between 2018 and 2077. The table was developed during the collaborative process that occurred with the PEIR and reflects declining inflows to the Sea. Please refer the response to IID-31. Also, please refer to the response to CVWD-7 regarding the adaptive management plan and the response to decreased inflow. No text revisions are required.

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		using drip and sprinkler irrigation which generate little or no surface run-off. By 2035 the Imperial County Farm Bureau estimates that that there will be very little surface run-off, if any, from the fields. The IID drains will only carry subsurface run-off. If this should become fact the estimated flow to the Salton Sea by 2035 will be closer to 500,000 acre feet a year, not 900,000 acre feet as modeled. This could mean neither river would be able to furnish the required water for this project.	
Imperial County Farm Bureau	ICFB-9	2.4.1.4 Boat Ramps A flat-bottom aluminum boat equipped with a long-shaft marsh outdrive is capable of running in extremely shallow water and even mud. The motors are also known as mud motors or backwater motors. At only 40 horsepower, at most, these boat/motor combinations are much cheaper and more cost effective to operate than an airboat and would be perfect for the SCH ponds.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).
Imperial County Farm Bureau	ICFB-10	2.4.1.7 Water Supply Does the State have a water right or the right to take the water from the New or Alamo Rivers for this project? MWD has filed for the rights to use the water. Will this all end up being a MWD project with MWD getting mitigation credits and trading the New and Alamo River water for Colorado River water? Will state have to buy this water from MWD?	Please refer to Master Response 6, Water Rights.
Imperial County Farm Bureau	ICFB-11	Section 2.0 Page 2-14 (Figure 2-4) also 2.4.1.8. Inflow/Outflow Structures Figure 2-4 shows a drawing of the precast concrete structure that will be used as a control and outlet structure for the water to move from pond to pond. These structures can only handle a small amount of water. Even the widest precast form available (48" Wide), will only allow 4.7 cubic feet per second (CFS) of water to flow through the structure with six inches going over the grade boards. In June, when evaporation is the highest, the water demand would be 253 CFS for Alternate 3. These small precast structures are fine for little duck ponds of 15 acres. They have no place in ponds exceeding hundreds of acres each. It would be better to install standard IID canal structures that allow for both an overpour and undershot. When demand is high more water could be moved through a bank of 72 inch wide control structures with jack-gates to allow for and set the appropriate undershot and overpour from the same structure.	Figure 2-14 is a general representation of the type of pre-cast structure that would be constructed in the ponds. The final size and location of these structures is a design issue and would be determined in the final plans based on flow rates and other design considerations. The representation shown in Figure 2-14 is sufficient for environmental review. No text revisions are required.
Imperial County Farm Bureau	ICFB-12	River Diversion Gravity Diversion Structure Will the gravity flow river diversion pipe lines run on both sides of the river? This will take up even more valuable farmland. Or will there be a cross-over from one side of the river to the other? If so, how will that be accomplished?	The gravity flow system proposed in Alternatives 1 and 4 would run on one side of the river. A pipe would be used to convey water from ponds on one side to the other side. The pipeline would be placed on a bridge structure to cross the river. No text revisions are required.
Imperial County Farm Bureau	ICFB-13	Brackish Water Pipeline The brackish water pipeline will disrupt farming while being installed and may very well disrupt the farm area of the individual fields it travels across to the point where the land cannot be farmed.	As discussed in Section 3.2, Agricultural Resources (Impact AG-1), the land right-of-way for the brackish water pipeline would be obtained from a willing owner. Canals and drains would be temporarily diverted during construction, and

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		<p>Tile drainage lines below the surface of the farm fields may have to be rerouted, which may prove to be impossible because of slope requirements.</p> <p>Deep groundwork may not be possible because the equipment may hit the buried pipeline. Lack of subsurface tile drainage in the area of the brackish water pipeline will lead to salt buildup and deterioration of the soil making it unfit to grow winter vegetables.</p>	<p>potentially during maintenance, but they would be restored once construction was completed; the buried pipeline would be positioned in a way that did not impede subsurface tile drainage. Once the brackish water pipeline was installed, crops could be grown in the right-of-way. The owner would be required to grow crops that did not interfere with the pipeline; this would be negotiated as part of the easement obtained for the use of the land. The Project team would work with the landowners to minimize disruptions to agricultural practices. Please refer to page 2-25, lines 19-21, which states that alignments that conflicted with existing facilities would either be rerouted or the Project engineer would work with the facility owner to minimize the effects.</p> <p>Note, however, that impacts on agricultural resources are one of the reasons that gravity diversion was rejected as part of the State's preferred alternative (see page 7-3).</p> <p>No text revisions are required.</p>
Imperial County Farm Bureau	ICFB-14	<p>The last sentence states: "It is estimated that three 5-foot-diameter pipes would be needed to minimize the velocity in the brackish water pipeline (thereby minimizing head loss)." By reducing velocity in the pipelines you will also be allowing the sediment to fall out and eventually plug the pipelines.</p>	<p>Sediment deposition is an important consideration for the gravity line, which is why a sedimentation basin would be placed at the upstream end of the pipeline. The sedimentation basin would be designed to remove a part of the sediment in the river water. With the pumped diversion, the discharge would be under pressure and would not allow the sediment to drop out in the short pipeline between the pump and the basin.</p>
Imperial County Farm Bureau	ICFB-15	<p>River Diversion Pump Stations These pump stations must not block access to the Salton Sea River deltas through the river channel. The New and Alamo Rivers are the main artery to the Salton Sea for waterfowl hunters and catfishermen, both who use boats launched in the area of current gauge stations to access the sea and/or the river for fishing, hunting, and sightseeing.</p>	<p>The diversion would reduce the river flow from the diversion location to the river mouth where the water would be returned. This is a distance of about 1 mile with the pumped diversion and about 3 miles for the gravity diversion (see Section 2). The proportion of the river flow that would be diverted during duck hunting season is substantially less than the amount cited for the maximum diversion in June. The Project would maintain a live stream downstream of the diversion at all times and would use the operations and adaptive management plans to govern SCH operations to accomplish this objective. Any pipeline crossing of the river would be elevated to approximately 6 feet above the water level to maintain boat access in the river. Moreover, the New River, the area where boats are currently launched, is not an officially designated location; it is merely a place where vegetation has been cleared to allow small boats to be carried to the river. Such an area could readily be replicated elsewhere if needed. At the Alamo River, other obstructions already prevent access by boats. No text revisions are required.</p>
Imperial County Farm Bureau	ICFB-16	<p>Saline Water Supply Pump Station Has anyone studied the saltwater delivery system? Will barnacles plug up the pipeline? Where boats have been left floating in the Salton Sea at marinas they usually sink within two years because of the weight of the barnacles that rapidly grow on their hulls.</p>	<p>According to recent observations by DFW biologists, barnacle populations have already been in marked decline for the last few years. This is supported by expectations from the literature (Simpson and Hurlbert 1998) that predict population declines at salinities over 50 ppt, due to weakening of the barnacles'</p>

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			tests and reduced growth rates. Thus, we do not expect to see historical levels of barnacle fouling when the Project is completed since salinity in the Salton Sea is already above 52 ppt. No text revisions are required.
Imperial County Farm Bureau	ICFB-17	Depending where the saltwater pump station is located, it may not be pumping salt water. The water exiting the New and Alamo River Deltas floats on top of the saltwater and moves counterclockwise with the current for some distance depending on the wind and current velocity before mixing with the saltwater. It is possible the saline pumps would then be pumping brackish water.	The pump station would be located based on salinity measurements, distance from the SCH ponds, and site conditions. The pump would be positioned vertically in the water column to avoid floating debris and not draw bottom sediments. No text revisions are required.
Imperial County Farm Bureau	ICFB-18	The north and northwest winds on the Salton Sea disturb and stir up the mud and sediment out to the 12 foot depth with every high wind over 15 mph. This is also where the majority of the killing hydrogen sulfide is released and red tides form during wind events. The saltwater intake will be in this area and could very well carry saline water to the SCH ponds that would kill the fish in the pond. Are there operational plans to stop saline water from entering tile drainage lines or farm fields when these events occur? That will affect the water balance of the project.	Please refer to the response to comment ICFB-17 regarding locating the saline pumps.
Imperial County Farm Bureau	ICFB-19	Are there provisions to run the salt water through a settling pond before dumping into the SCH ponds? Sea water can contain high silt loads after a wind and the silt will most definitely cause accelerated erosion to the pumps and add to the silt load entering the SCH ponds.	Settling ponds are not proposed for the saline system. The saline diversion could, however, be connected with the proposed settling ponds for river water to provide the settling suggested in the comment. This would be considered as part of the final Project design. No text revisions are required.
Imperial County Farm Bureau	ICFB-20	There is no provision noted how the saline pumps will be accessed for their required constant maintenance and replacement. A similar pumping system currently exists in the Willey Reservoir. The three pumps deliver 48 CFS to the Vail 3 heading over 3.5 miles away through a pressurized pipeline. These pumps must be pulled and transported to a repair facility on a frequent basis. They also require an automated trash rack that collects trash and aquatic weeds in the water and deposits it in a dumpster that is serviced sometimes twice a day when aquatic vegetation is heavy. In the Salton Sea currents carry floating trash dumped in the sea by the rivers, especially after large rain events or other events that increase the flow of the rivers such as mitigation water being added to the Salton Sea. There is no mention of silt or trash being a problem with the saline pumps. Access to the pumps for maintenance and hauling off the collected trash will be problematic.	The final design would include providing access by boat to the saline pump station. All available data and local knowledge would be accessed to design the site access, trash racks, and pump maintenance requirements. No text revisions are required.
Imperial County Farm Bureau	ICFB-21	Power Supply Who will be responsible for payment of power? Has anyone even figured out how much power will be needed? If alternative 3 is chosen and water for the ponds will be kept at 20 PPT with a 28 day residence time you would have to supply the power necessary to lift 172 cfs of brackish water out of the New River and pump 80 cfs of saline water from the Salton Sea. This will require a tremendous amount of horsepower. Has anyone calculated how much power this	The power needs of the Project are presented in Table 3.6-2. The power calculations are based on the estimated discharge, pipe length, head, and viscosity of the water to yield horsepower, which is then converted to power in kilowatts. Initial discussions have been underway with IID regarding power supplies, extending power lines, and tie-in to IID facilities. IID has indicated that while

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		will require or if the infrastructure will even handle that much power?	additional lines may be needed to connect existing 3-phase power with the SCH pumps, IID can supply the power to the SCH Project. No text revisions are required.
Imperial County Farm Bureau	ICFB-22	There is no mention of estimated costs for the operation and maintenance of this project, including power. This is important stuff! Why is it missing?	Please refer to Master Response 5, Project Costs.
Imperial County Farm Bureau	ICFB-23	Sedimentation Basin The planned one day retention time is only sufficient to remove the sand and heavy fraction of the silt particles. The majority of the silt particles and all of the clay particles will remain suspended and travel to the SCH ponds. The planned sedimentation basins will have very little effect on the turbidity of the river water.	The estimate of a 1-day residence time in the sedimentation basin is based on laboratory analysis of New River water samples. Turbidity was used as a measure of the suspended material in a sample and measurements were conducted over several days. That analysis showed a 95 percent reduction in turbidity in 1 day. The improvement in clarity beyond 24 hours was minimal, reflecting the fine particles still in suspension. Clay particles would remain in suspension longer, and it would be impractical to retain this water until the fine particles settled. These particles would settle in the SCH ponds, or possibly remain in suspension because of wind and wave action. Regardless, the bulk of the river particles would drop out. The deposition of river sediment can be seen in the backwater river areas, suggesting that these particles do drop out when the velocity slows. No text revisions are required.
Imperial County Farm Bureau	ICFB-24	The planned 2:1 slope of the banks of the sedimentation basin will be prone to sloughing and erosion from wind driven wave action. A buildup of muskrat populations and their holes and burrows along the shoreline, will create massive erosion and sloughing. Wave action forcing water into their burrows and dens will create a hydraulic battering ram which will quickly erode the banks. Nothing in this report shows this type of problem has been considered. The Willey Reservoir, situated on the south side of the New River near the planned New River sedimentation basin, has experienced waves that built to two feet high during strong west winds. A series of serpentine structures in the basin would reduce wind erosion.	A buildup of muskrat populations is not expected at the sedimentation basins. Muskrats feed primarily on aquatic vegetation, and as discussed in Section 2.4.1.16, Sedimentation Basin, the basin would have steep side slopes (2:1) to discourage establishment of emergent vegetation. The basin would also be excavated periodically, which would remove any vegetation that did occur. Muskrat populations also could be trapped or otherwise removed if they posed a problem. Wave and wind erosion would be prevented because of Project design elements such as riprap. The final design would determine the most effective side slope for the sedimentation basin. No text revisions are required.
Imperial County Farm Bureau	ICFB-25	The slopes of the bank should be vegetated with native saltgrass, (<i>Distichlis spicata</i>), prior to the initial filling of the sedimentation pond, to reduce erosion, sloughing and the establishment of noxious weeds. Saltgrass is capable of living in very harsh climates, and thrives in saline soils, and grows vigorously with brackish to saline water. The plant is also capable of transferring oxygen to its root system if the root system is submerged below the water for extended periods of time. All of these factors make native saltgrass an excellent ground cover to armor the banks of the sedimentation basin. The IID's Vegetation Management Plan promotes the growth of saltgrass to armor their canals and drain banks to reduce sloughing, reduce weed populations, and reduce silt sedimentation in its 3,000 miles of drainage ditches	This suggestion is noted. The final engineering design would develop a revegetation plan as appropriate to maintain cut slopes. Given the harsh growing environment at the site, the Project would need to operate for some time before many of the issues identified in the comment are realized and solutions are developed. The adaptive management plan also would include revegetation information to address the potential for future problems. Planting with saltgrass may be considered as an adaptive management option to reduce erosion, sloughing, and the establishment of noxious weeds. No text revisions are required.

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		and canals.	
Imperial County Farm Bureau	ICFB-26	Interception Ditch/Local Drainage (Applies to all alternatives) Sloughing in the interceptor drain could cause the drainwater to back up into the adjacent field's tile drainage lines. Who would be responsible for maintenance of these drains specifically maintaining the slope and shape of the drain banks as well as controlling unwanted vegetation? Who would pay for this maintenance?	The interception ditch design would focus on a stable bed and sides for the ditch. As stated in on page 2-19, lines 21-23, the interception ditch would be designed to prevent water from backing into the ditch. It should be noted that the drainage ditches present in the area have steep sides and are typically devoid of vegetation. IID would maintain the interception ditches in the infrequent case that they need to be maintained. No text revisions are required.
Imperial County Farm Bureau	ICFB-27	The Imperial County Farm Bureau requests the interceptor drain be planted with native saltgrass, (<i>Distichlis spicata</i>), to reduce erosion in the drain as well as reduce noxious weed from becoming established.	Please refer to the response to ICFB-25.
Imperial County Farm Bureau	ICFB-28	Since this drain will also be collecting salty seepage water from the SCH ponds it will increase the salinity of the water in the drains. This may affect the natural flora and fauna that reside in the IID drain system. Should the drain plug due to trash, mechanical failure, sloughing or earthquake liquefaction, the adjacent farm fields will be at risk from saltwater backing up into the field tile drainage system and causing damage to the soil and existing crops. Mitigation will be necessary and a planned and funded response program is needed should this happen.	The SCH interception ditch would be downstream of all farmland. As discussed in Section 2.4.1.7, it would be designed to prevent the Project from causing water to back up in the agricultural drains and therefore would not affect the water quality within the drains. A maintenance plan (Section 2.4.6) would address the typical and unforeseen maintenance obligations that could occur with the Project. No text revisions are required.
Imperial County Farm Bureau	ICFB-29	Aeration Drop Structures Unless properly designed the aeration drop structures may cause erosion of the berm where water drops 2-5 feet into the adjacent pond.	All necessary erosion control would be included in the final design. No text revisions are required.
Imperial County Farm Bureau	ICFB-30	Bird Habitat Features The roosting islands planned with steep sides will be subject to erosion on their north and west sides.	The shape, size, elevation, and slope of the islands would be considered in final design (refer to Section 2.4.1.19). It is understood that erosion would occur on any unprotected islands (as it currently does in the adjacent Sonny Bono Refuge). The maintenance and adaptive management plans would address this issue and recommend any corrective measures needed. No text revisions are required.
Imperial County Farm Bureau	ICFB-31	How will salt cedars and other halophytes be controlled on these and other islands planned?	Salt cedar may become established on some of the islands in the lower salinity ponds. A maintenance plan (Section 2.4.6) would address the acceptable levels of plants and methods to maintain the appropriate levels. This has been clarified in the text.
Imperial County Farm Bureau	ICFB-32	Fish Habitat Features (Swales or Channels) High winds from the west, northwest, and north will stir up large amounts of silt and clay in the ponds which will rapidly fill the swales or channels planned for the project. In addition clay, silt, dead plankton and other detritus will eventually mix with the clay and silt and add to the mix that fills the swales or channels. The swales or channels SCH ponds will quickly become repositories for easily stirred up sediment to foul the ponds	The in-pond swales would be susceptible to sloughing or material settling. The extent of such filling would be controlled by the initial size of the swales (narrow swales experience more sloughing and settling compared with wider swales). Long-term monitoring would assess the changes in the pond bed form and possible biologic changes that may result. It is possible that in a future year, the swales would need to be re-dredged. This would be addressed as part of the

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		every time a wind event greater than 15 miles per hour occurs. The newly built IID Managed Marsh has similar swales next to the berms and they are already half full of silt after only two years of operation.	maintenance plan (Section 2.4.6). No text revisions are required.
Imperial County Farm Bureau	ICFB-33	Operational Facilities Storing boats and other equipment at the Wister Headquarters is both impractical and a waste of fuel and time for ponds built in the New River Delta Area which is 27 miles away from Wister. It would be more practical to store the needed equipment in one or more lockable portable containers on site.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). This opinion will be considered when developing the final Project design.
Imperial County Farm Bureau	ICFB-34	Fish Rearing Rapid plankton growth in the ponds, fueled by high nutrient loads from the water sources, both brackish and saline, may lead to anaerobic conditions at times. The breakdown of dead plankton will reduce oxygen and cause a buildup of hydrogen sulfide that will act as a poison in the ponds as well as lower the pH and create an imbalance in the water chemistry.	This potential was acknowledged in Section 3.4, page 3.4-48, lines 18-32, and Section J.3, page J-8, lines 1-12 and lines 18-26. The Project is a proof-of-concept project that would use an adaptive management approach with monitoring to adapt operations as needed. Please refer to Master Response 7, Operations and Adaptive Management. No text revisions are required.
Imperial County Farm Bureau	ICFB-35	Should a massive fish die-off occur a plan needs to be included for the fast and efficient cleanup and disposal of the dead fish.	The potential for fish and bird die-offs to could occur was acknowledged on page 2-26, lines 16 and 17. Dead birds would be removed, but dead fish are not now cleaned up during fish die-offs, nor would they be during SCH Project operations. No text revisions are required.
Imperial County Farm Bureau	ICFB-36	Public Access The Salton Sea Delta areas have been favorite waterfowl hunting spots for over a hundred years which is evidenced by the hundreds of blinds that can be seen around the delta of all three rivers that feed the Salton Sea. The SCH pond locations will cover many of these hunting areas. These areas must remain open to waterfowl hunting as they have in the past, including access to the Salton Sea through the New and Alamo River channels. A lease clause in the IID lease with the State must specify that the area will remain open to public access for recreational purposes using gasoline powered boats in the river channels and furthermore that boats have access to the SCH ponds using electric motors. In addition, the current trails along either side of both rivers, which provide access to the delta areas, must remain open to foot, ATV, or off-road traffic.	The areas where the ponds would be located would no longer be viable for hunting as the Salton Sea recedes. Public access is discussed in Section 2.4.1.24. As discussed in on page 2-22, lines 6 and 7, waterfowl hunting may be allowed, consistent with the protection of other avian resources. Details regarding public access would be addressed in a lease agreement with IID. No text revisions are required.
Imperial County Farm Bureau	ICFB-37	Land-Based Equipment Tractor pulled or self-propelled scrapers or any other equipment with rubber tires will prove impractical in the areas around the New and Alamo Deltas. The ground is too saturated to support their weight once the top one-half to one foot of soil is removed. Long-reach excavators, working from atop the berm they are constructing may be the only practical way to construct the berms near the Sea. Any dozers or excavators used should be equipped with wide low-pressure tracks.	The SCH's Project geotechnical engineer would address these issues in the final design. Extensive sampling of the soil profile and strength characteristics have been conducted to assist in the design, and the need to use specialized equipment based on these characteristics was discussed on page 2-23, lines 14-17. No text revisions are required.
Imperial County Farm	ICFB-38	Floating Equipment There is no information discussing how the barge-mounted excavator or clamshell dredge would be launched in the sea or what precautions	The floating dredge would be launched at the nearest ramp that was accessible for the type of equipment. A strict safety plan would be developed and followed to

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Bureau		taken to protect it during high wind events and rough seas.	address the often adverse conditions that are present in the Sea. The dredge would operate in a channel that it has dug (slightly wider than the barge) rather than in the open Sea. No text revisions are required.
Imperial County Farm Bureau	ICFB-39	Pumping Plants Pumping water directly from the New or Alamo River without first running it through a settling basin will lead to premature erosion of the pump casing and impeller and failure of the pumps as evidenced at the recent pilot project at the corner of Davis and McDonald Roads where water was pumped directly from the Alamo River at the end of Garst Road and conveyed through a pipeline to the Pilot SCH ponds.	Sedimentation basins are part of each alternative discussed in the Draft EIS/EIR (refer to Section 2.4.1.16). No text revisions are required.
Imperial County Farm Bureau	ICFB-40	Interaction with Existing Facilities It is unfortunate that the authors of this EIS/EIR are unfamiliar with agriculture in the Imperial Valley. It is also unfortunate that they did not accept help and input from locals familiar with agriculture even though assistance was offered. An example of interaction with existing facilities is given that states: "If the gravity brackish water pipeline were to intersect an agricultural drain, the drain would be rerouted to bypass the work area until the brackish water pipeline was placed and the backfilled. The drain would then be restored to the pre-Project condition." This statement shows a total lack of knowledge of the IID's drain infrastructure and fails to understand that it is not a simple matter to reroute an IID drain by simply moving it. Tile drainage lines enter the IID drains at a guaranteed elevation and location in the IID drain so that brackish drainwater will not back up into the farmer's field, thus pushing the salt in the water to the surface. The only way the subsurface drain water could be rerouted would be to pump it and maintain the existing unsubmerged tile outlet elevation. It can be assumed that a brackish water pipeline eventually would have to rise above the level of the tile drainage lines and then the farm fields it is traversing to reach the SCH ponds at the correct elevation. That means these pipelines would end up cutting any farm fields as well as the subsurface drainage lines in half and making it near impossible to farm the field while maintaining the required slope of the land as well as the slope and guaranteed outlet elevation of the tile drainage system.	Concerns raised by the Imperial County Farm Bureau at the meeting held on October 28, 2010 were considered in developing the Project design and evaluating the environmental impacts of the Project. Members of the Farm Bureau also were invited to participate in quarterly Stakeholder workshops held to provide updates regarding Project progress and had the opportunity to express any concerns about the Project design at that time. Concerns about the impacts of the brackish water pipeline's effects on agricultural drains were not mentioned during these meetings, but they were addressed in the Draft EIS/EIR (refer to the response to ICFB-13). No text revisions are required.
Imperial County Farm Bureau	ICFB-41	Vehicle Routes Like the previous section, this section contains faulty information and shows the person that wrote this section has never followed the routes listed. The route described to reach the New River site follows Bruchard Road, which is a very soft and sandy single lane road in places once it crosses Walker Road. Trucks seldom use this road because they easily become stuck in the sand. Bruchard Road ends at Foulds Road, which is .75 miles south of the project site. The single lane 14 foot wide road that continues north is a ditch bank easement road for IID and farmers which is not suited for truck traffic without major	The final routes would be verified in the field prior to construction, but slightly modifying the routes would not change the significance of the impacts in the document because traffic conditions are similar throughout the general area. No text revisions are required.

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		<p>reconstruction. Trifolium Lateral 12 canal/drain runs along the west side of the road and a IID power line and farmer's field, three to four feet lower than the road, runs along the east side of the easement road.</p> <p>This road dead-ends at the south side of the New River which is flowing west at this point. This easement road would only access the SCH ponds to the south and west of the New River. There is no way to get to the other half of the project on the north side of the New River.</p> <p>For truck traffic to use this road it would have to be widened. This would require moving the existing power line, taking agricultural land out of production to widen the road, rerouting the field drains along the east side of the road, rerouting the tile drainage lines, as well as moving the two deep tile cisterns and pumps.</p> <p>Directions to the Alamo site are correct until you reach West Sinclair Road. The directions fail to mention that from there the trucks would travel east on Sinclair Road one mile to Garst Road and then travel 1.65 miles north to the project site.</p>	
Imperial County Farm Bureau	ICFB-42	2.4.3 Operations Plans need to be crafted to address what to do if funding should disappear during construction or after the project is operating. Building this tremendous infrastructure and then walking away from it without a discussion of what would happen to the adjacent agriculture is not advisable.	Please refer to Master Response 4, Project Funding.
Imperial County Farm Bureau	ICFB-43	2.4.5 Mosquito Control West Nile virus thrives in the Delta areas of the Alamo and New River. From the shoreline of the Salton Sea back 50 to 300 yards, (depending on the slope of the ground), the clay that was deposited as the Salton Sea receded cracks and shrinks as it dries out leaving a web of cracks one inch wide and up to eight inches deep. These cracks then partially fill with seepage water that creates the perfect habitat for mosquitoes to breed. Treatment during construction will be expensive but necessary and may require aerial application of the proper pesticide or larvicide to gain control.	The Imperial County Health Department (personal communication, P. Johnson 2011) indicated that cracks in the substrate would not pose a problem in terms of mosquito production. No text revisions are required.
Imperial County Farm Bureau	ICFB-44	River Water Source From looking at the rough map/photograph it appears the brackish water would be diverted into a sedimentation basin just west of Lack Road on the south side of the New River and east of the IID Willey Reservoir and bordered on the south by Foulds Road. This property, currently owned by Jack Brothers, is intensively farmed to winter vegetables, primarily broccoli and cauliflower. By removing this field from agricultural production you would be reducing some of the prime farmland in the Imperial Valley that feeds the nation during the winter months. The rest of the year wheat or export hay is produced.	The impacts on farmland were acknowledged in Section 3.2, Agricultural Resources and Section 7, Summary Comparison of Alternatives, and such impacts were one of the reasons that Alternative 3, which relies on pumped diversion, was selected as the State's preferred alternative. No text revisions are required.
Imperial County Farm Bureau	ICFB-45	The buried gravity pipe lines would have to cross a deep channel (Trifolium Lateral 9 Drain), pass by Willey Reservoir on its south side because there is not enough room between the New River and the Willey Reservoir on the north side. In passing on the south side of Willey Reservoir it would be traversing three fields	Please refer to the response to ICFB-44.

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		famed by Del Sol Farms. These three fields also contain prime agriculture ground and are intensely farmed to cauliflower, carrots, tomatoes, cut flowers, potatoes, lettuce, broccoli, and sweet onions to feed the nation during the winter months. The rest of the year wheat or export hay is produced. At times they are farmed to alfalfa.	
Imperial County Farm Bureau	ICFB-46	<p>Saline Water Source (applies to all Alternatives) As the New River brackish water exits the New River Delta into the Salton Sea it floats up on top of the saltwater. Strong counter-clockwise currents immediately carry it in an easterly direction where it follows the shoreline all the way to the Alamo Delta and beyond. The floating freshwater is often found two miles or more out to sea. In other words it does not immediately mix with the saltwater.</p> <p>The water exiting the New River will float on top of the salt water and not mix for some time depending on wind conditions. During this period Salton Sea Currents will carry the brackish New River water to the area of the saline pump station.</p> <p>Where the freshwater and saltwater mix it creates what is known to locals as a scum line. Trash from the New River is concentrated at this scum line. When the scum line is viewed on sonar it shows trash stacked up from the bottom of the sea floor to the surface, trapped there by two different waters with differing specific gravities. The scum line is constantly moving, carrying the trash with it and is often in the area near the proposed saline pump intake. A system of trash racks would have to be built and maintained on a constant basis. There are no plans showing how this trash will be removed from the pump station, one out in the Salton Sea.</p>	Please refer to the response to ICFB-17.
Imperial County Farm Bureau	ICFB-47	Hydrogen sulfide is a poison, generated by rotting algae and plankton that settles on the bottom. The hydrogen sulfide is often trapped by a thermocline and then released during wind events. Red Tides are also generated in this area. Both the hydrogen sulfide and water from the poisonous red tide will be picked up by the saline pump and transported to the pond site where it will poison the fish and invertebrates.	A possible die-off in the SCH ponds because of local pond conditions or conditions imported from the source water would be addressed in the operations and adaptive management plans. This is an impact on the Project, not an impact of the Project. No text revisions are required.
Imperial County Farm Bureau	ICFB-48	In addition, the floating freshwater carries heavy silt loads. Depending where the saltwater pump station and intake is located brackish water, heavily laden with silt will be pumped to the SCH ponds instead of saline water.	Please refer to the response to ICFB-17.
Imperial County Farm Bureau	ICFB-49	To further complicate matters, north and northwest winds on the Salton Sea disturb and stir up the mud and sediment on the bottom of the Salton Sea out to a depth of 12 feet with every high wind over 15 MPH. The saltwater intake will be in this area. Are there provisions to run the salt water through a settling pond before dumping into the SCH ponds? Sea water can contain high silt loads after a wind and most definitely will cause accelerated erosion to the pumps and	Please refer to the response to ICFB-17.

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		siltation at the SCH ponds.	
Imperial County Farm Bureau	ICFB-50	Sedimentation Basin The Draft EIS/EIR states the diverted brackish water would be retained in the sedimentation basin for one day to allow the silt to settle out. This is not sufficient time. Only the sand and heaviest fraction of silt will settle out in one day leaving the majority of the silt and clay particles in suspension.	Please refer to the response to ICFB-23.
Imperial County Farm Bureau	ICFB-51	The Draft EIS/EIR also states that a 60 acre sedimentation basin would be constructed and excavated below the ground surface to 20 feet. It is impossible to excavate much more than five feet below the surface because the weight and vibration of the equipment will create hydraulic pumping leading to liquifaction of the soil.	Please refer to the response to IID-30.
Imperial County Farm Bureau	ICFB-52	A 60 acre area excavated to 20 feet below the surface will generate 1,936,000 cubic yards of soil. The plan does not address where this amount of soil would be deposited. To put this amount of soil in proper perspective, if a dike were constructed using this large amount of spoil, and its dimensions were 100 feet wide at the base, 20 feet wide at the top, and 15 feet high, there would be enough soil to build a dike of this size over 11 miles long. Furthermore if you loaded all the truck and trailers necessary to haul this much dirt and parked them end to end they would reach from the Salton Sea to the Mississippi River near Memphis.	The final design would balance cut and fill to the extent feasible. Excavated material from the upstream sedimentation basin could be used in berm construction for both the foundation and the overlying berm. Note that the Alternative 1 exterior berm would be 23.1 miles long, and the Alternative 4 berm would be 11.8 miles long. The material could also be used to construct islands or made available to other users in the area, including other restoration projects or agricultural uses. No text revisions are required.
Imperial County Farm Bureau	ICFB-53	Conceptual Layout of Alternative 1 As currently drawn, the exterior berm in the far northeast corner of East New pond and interception drain, cuts through 15 acres of private land owned by Sea View Conservancy. The legal description of this property is: The east ½ of the southeast ¼ of section 23, township 12 south, range 12 east, San Bernardino baseline meridian. This property is part of a long term Audubon California Landowner Stewardship Project and any disturbance is forbidden.	Under Alternative 1, the land where the SCH ponds would be located is owned by IID and would be leased from IID for the Project's duration. As indicated in footnote 4 on page 2-28, the selected site would be surveyed prior to construction, and the boundaries shown on Figures 2-6 through 2-11 may be adjusted somewhat based on the results of these surveys. No text revisions are required.
Imperial County Farm Bureau	ICFB-54	River Water Source The metal bridge which crosses the New River and is used to support the diversion pipes that carry the pumped water to sediment basins on either side of the New River must remain high enough to allow boat traffic to pass underneath the structure.	The river pipeline crossings and associated support structures would be designed to allow the existing boat usage to continue. No text revisions are required.
Imperial County Farm Bureau	ICFB-55	Saline Water Source Please refer to comments made for Alternative 1.	Please see responses to comments on the location of the saline water supply (ICFB-16 through ICFB-20).
Imperial County Farm Bureau	ICFB-56	Sedimentation Basins (applies to Alternative 3 also) No information is given on how the sedimentation basin is constructed, how deep it will excavated or where the spoil will be put. Hopefully it is not similar to the sedimentation basin	The sedimentation basin in Alternatives 2 and 3 would be placed in the SCH ponds with similar base and top of berm elevations. The construction techniques and the configuration of the basin would be determined in the final design. No

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		described for Alternate 1.	text revisions are required.
Imperial County Farm Bureau	ICFB-57	Conceptual Layout of Alternative 2 As currently drawn, the exterior berm in the far northeast corner of East New pond and interception drain, cuts through 15 acres of private land owned by Sea View Conservancy. The legal description of this property is: The east ½ of the southeast ¼ of section 23, township 12 south, range 12 east, San Bernardino baseline meridian. This property is part of a long term Audubon California Landowner Stewardship Project and any disturbance is forbidden.	Please refer to the response to comment ICFB-53.
Imperial County Farm Bureau	ICFB-58	The map/photo shows no connection to the interception drain for the Trifolium Lateral 12 drain. In addition there is no information regarding the size of the interception drain, how deep it will be, or which direction the two drains flow. Has any surveying been done to determine if the interception drain can successfully intercept the IID lateral drains at the correct elevation and then be able to transport the IID drain water around the project and into the Salton Sea?	Photos in the Draft EIS/EIR are used only to orient the readers. Site-specific topographic data would be used to design the interception ditch to ensure that water in the ditch flows to the Sea. No text revisions are required.
Imperial County Farm Bureau	ICFB-59	River Water Source The metal bridge which crosses the New River and is used to support the diversion pipes that carry the pumped water to sediment basins on either side of the New River must remain high enough to allow boat traffic to pass underneath the structure.	Please refer to the response to ICFB-54.
Imperial County Farm Bureau	ICFB-60	Saline Water Source Please refer to comments made for Alternative 1.	Please refer to previous responses to comments on the saline water supply (ICFB-16 through ICFB-20).
Imperial County Farm Bureau	ICFB-61	Sedimentation Basins No information is given on how the sedimentation basins are constructed. Hopefully it is not similar to the sedimentation basin planned for Alternate 1.	Please refer to the response to ICFB-56.
Imperial County Farm Bureau	ICFB-62	Water Demand The Imperial County Farm Bureau developed a water demand model to better understand the amount of daily evaporation in the SCH ponds and therefore the amount of saline and brackish water need daily throughout the year to keep the ponds at a static level. This model is useful in determining the amount of saline and brackish water that is needed for various alternatives, various salinity of the rivers and Salton Sea, and various residence times. It shows that when salinity of the SCH ponds exceeds 28 PPT the amount of saline water required almost equals the amount of river water required.	The diversions calculated in the Draft EIS/EIR used similar relationships. No text revisions are required.
Imperial County Farm Bureau	ICFB-63	There is no mention of the amount or cost of power necessary to pump the tremendous amounts of water required or the cost of maintenance of the pumps and pump intake stations.	Please refer to Master Response 5, Project Costs, regarding the need to include information on Project costs in the Draft EIS/EIR. The cost of power would be negotiated with IID. No text revisions are required.
Imperial	ICFB-64	Pond Connectivity Without knowing the acres of each individual pond or the	Please refer to the response to ICFB-11.

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County Farm Bureau		size of the control structures it is impossible to judge whether the control structures planned for each individual pond is of sufficient size. It would be best if the control structures were wider and used jack gates like those used on the IID canal system so that the gates can be set with an undershot which will handle much more water than a control structure that uses a overpour control structure. The jack gates used by the IID can easily be set for an undershot and also be able to handle an overpour at the same time should a summer flash flood occur in the area, where dumping three inches of rain in a half hour period is not uncommon.	
Imperial County Farm Bureau	ICFB-65	Conceptual Layout of Alternative 3 As currently drawn, the exterior berm in the far northeast corner of East New pond and interception drain, cuts through 15 acres of private land owned by Sea View Conservancy. The legal description of this property is: The east ½ of the southeast ¼ of section 23, township 12 south, range 12 east, San Bernardino baseline meridian. This property is part of a long term Audubon California Landowner Stewardship Project and any disturbance is forbidden.	Please refer to the response to ICFB-53.
Imperial County Farm Bureau	ICFB-66	The map/photo shows no connection to the interception drain for the Trifolium Lateral 12 drain. In addition there is no information regarding the size of the interception drain, how deep it will be, or which direction the two drains flow. Has any surveying been done to determine if the interception drain can successfully intercept the IID lateral drains at the correct elevation and then be able to transport the IID drain water around the project and into the Salton Sea?	Please refer to the response to ICFB-58.
Imperial County Farm Bureau	ICFB-67	Aerial Backgrounds of all the Alternatives It is unfortunate that the aerial backgrounds shown for all alternatives are not current photographs. Current photographs were easily available and one local aerial photography company even offered their services to the consultant for the project but were told their services were not needed. It is very difficult to comment on the Draft EIS/EIR when the Salton Sea has evaporated numerous feet and the shoreline has receded ¼ to ½ mile than shown on the photos being used.	The photography used in the Draft EIS/EIR is recent and sufficient for background imagery. The final design would be based on surveyed topography from recent aerial LIDAR and ground surveys conducted in 2010 and 2011. No text revisions are required.
Imperial County Farm Bureau	ICFB-68	Saline Water Source (Comments apply to Alternatives 4 & 5) This plan is lacking detail but it appears the saline water will be conveyed through the old original Red Hill Marina access channel build in the 1950's. It is unclear where the pumps will be located. The plan says the pump will be located in the Sea west of Red Hill but the map/photo show it on land near Red Hill. The original channel was armored with rock and appears to still be usable if the actual channel were cleaned with a long-reach excavator and extended out into the sea to deeper water. Like the current channel, a dog-leg at the western tip of the channel would have to be included in the plan to keep silt from building up at its entrance. The channel could also be extended around Red Hill, all the way to the	The exact location and design of the saline pumps would be part of the final design process. Water would be conveyed across the river with an elevated bridge facility. No text revisions are required.

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		south side of the Garst Road Bridge on the Alamo River negating the need for a pump in the sea. There is no discussion how the saline water will be conveyed across the Alamo River to the north side to the ponds.	
Imperial County Farm Bureau	ICFB-69	<p>As discussed earlier in this report this plan will have to address the following issues:</p> <ul style="list-style-type: none"> ▪ River water, laden with trash, floating on top of the salt water at the inlet point of the channel and only brackish water entering the pumps ▪ High silt loads during wind events ▪ Hydrogen sulfide being released during high wind events and being transported to the SCH ponds ▪ Red tides forming near the channel inlet and being transported to the SCH ponds ▪ Sediment buildup in the actual channel 	Please refer to the responses to ICFB-14, ICFB-20, ICFB-34, and ICFB-47.
Imperial County Farm Bureau	ICFB-70	Sedimentation Basin The location of the sedimentation basin is not well described but appears to be prime farm land owned by Brant Family Farms and currently irrigated from Vail Lateral 1. If it is built similar to the sedimentation basin described for Alternative 1 the same comments made for that project will apply here as well.	Please refer to the response to ICFB-56.
Imperial County Farm Bureau	ICFB-71	It also appears that the water will be conveyed west through the three massive pipelines from the planned sedimentation basin. The lines would have to cross the Vail 2 drain, Kalin Road (Paved), Vail 2 Canal, Vail 2A drain, Hatfield Road, Vail 2A Canal, Vail 3 drain, then turn north, following Garst Road to the south side of the Alamo River, cross the Alamo River, and finally arrive at the SCH pond location on the north side of the Alamo River. It is unclear how these pipe lines would cross the Alamo River to reach the pond site.	The precise pipeline route has not been determined. The water delivery pipeline would cross the Alamo River on a bridge structure. No text revisions are required.
Imperial County Farm Bureau	ICFB-72	The described area where the sedimentation pond and pipe line to the SCH pond site is planned is also an area that has shown tremendous subsidence in the past 25 years. IID engineers have recorded 15 inches of subsidence in the area. As a result it has become difficult to deliver the amount of water in the IID canals that they were originally designed to handle. The farmer who farms most of this area has had to re-level his property, abandon and re-install tile drainage lines, and replace his concrete lined supply ditch because of subsidence.	The final design would include geotechnical analyses of the Project features and address issues such as constructing in an area that is experiencing subsidence. No text revisions are required.
Imperial County Farm Bureau	ICFB-73	Pond Layout (Comments apply to all Alamo Projects) The location of the ponds for Alternative 4 is situated in the middle of the most active area of CO ₂ vents and mud pots at the Salton Sea. If all of this CO ₂ is trapped by the ponds it will lead to massive algae blooms, the reduction of dissolved oxygen, the lowering of the water's pH, and production of hydrogen sulfide, all of which will kill	The presence of CO ₂ vents at the Alamo River site is an issue that must be considered in the final design of the Project should a site at the Alamo River be selected. The design should consider ponds that exclude the vents or have a low residence time that would turn over the pond water quickly to prevent the

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		any fish and invertebrates trying to be grown. In the past, natural currents carried the high concentrations of CO ₂ out of the area and diluted it with the Salton Sea water.	conditions suggested in the comment. No text revisions are required.
Imperial County Farm Bureau	ICFB-74	Agricultural Drainage and Natural Runoff According to the map/photo on page 2-43 there is no provision for the IID N, O, and P Lateral Drains to exit to the Salton Sea. According to the plan, they are blocked by the project's berm and have no access to the interceptor drain.	The interception ditch in this area would be designed to connect these drains to the Sea. The plans shown in the Draft EIS/EIR are still conceptual. No text revisions are required.
Imperial County Farm Bureau	ICFB-75	IID's N, O, P, Q, R, and S Lateral drains currently empty directly into the Salton Sea. In the mid 90's when the Salton Sea reached its highest elevation and started to recede, it deposited a barnacle shoal along the shoreline east of Mullet Island. The barnacle shoal was high enough to block the drain water from the various alphabet drains that drained directly into the sea but it was very porous and drain water flowed through the barnacle shoal and into the sea. In the process though, it flushed the saltwater from the shoal and soil underneath. Eventually silt was trapped and salt cedar seeds germinated and the salt cedars rooted down, anchoring the barnacle shoal. As time went by the shoal blocked more silt and eventually the water from the alphabet drains began to pond up behind the natural berm and aquatic plants began to grow. First alkali bulrush and later cat-tails as the salt was leached out of the soil and a beautiful marsh, close to 1,000 acres in size, was formed. The interceptor drain should not disturb this marvel of nature and should be constructed to the west of the natural barnacle shoal berm.	We agree with the commenter that the marsh is an important biological resource. As presented in Section 2 of the Draft EIS/EIR (Figures 2-9, 2-10, and 2-11), Alternatives 4, 5, and 6 would not impinge upon the function of the marsh, since structures would be constructed at a lower elevation than this habitat. In the conceptual drawings, an interception ditch is shown for drains N, O, and P, which flow into Morton Bay. An interception ditch for drains Q, R, and S, which are the sources of water for this marsh, is not currently part of the Project design. Thus, the Project would avoid wetlands controlled by the barnacle shoal and adjacent marsh. The potential impacts of disturbance to sensitive species which use the marsh were discussed in Chapter 3. No text revisions are required.
Imperial County Farm Bureau	ICFB-76	Pond Location The photo/map on page 2-47 shows that the north end of the north pond at Wister Beach is on private property owned by Al & Carson Kalin. The legal description of this property is: The west ½ of section 34, township 10 south, range 13 east, San Bernardino baseline meridian. The southeast corner of this property is one mile west of the intersection of Davis and Spoony Road.	Please refer to the response to ICFB-53.
Imperial County Farm Bureau	ICFB-77	Agricultural Drainage and Natural Runoff According to the map/photo on page 2-47 there is no provision for an interceptor drain to pick up the drain water for IID Q, R, S, T, and U Lateral Drains. According to the plan, they are blocked by the project's berm. The natural freshwater wetland fed by these drains have no way to exit to the Salton Sea.	Please refer to the response to ICFB-74.
Imperial County Farm Bureau	ICFB-78	Berm Configuration The photo/map on page 2-47 shows a river berm between McDonald and Hazard Road. There is no river at that location.	It is not clear which berm is referenced in the comment, but the dashed line near Hazard Road refers to the remnant of the berm from the USGS demonstration ponds. No text revisions are required.
Imperial County Farm	ICFB-79	Saline Water Source The water exiting the Alamo River will float on top of the salt water and not mix for some time depending on wind conditions. Salton Sea	Please refer to the response to ICFB-17 and ICFB-20.

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Bureau		Currents will carry the brackish Alamo River water to the area of the pump station. Where the freshwater and saltwater mix, it creates what is known to locals as a scum line. Trash from the Alamo River is concentrated at this scum line. If the scum line is viewed on sonar it will show trash stacked up from the bottom of the sea floor to the surface. The scum line is constantly moving and it is often in the area near the saline pump intake. A system of trash racks would have to be built and maintained on a constant basis.	
Imperial County Farm Bureau	ICFB-80	<p>This plan will have to address the following issues:</p> <ul style="list-style-type: none"> ▪ Brackish Alamo river water floating on top of the salt water at the pumping platform ▪ High silt loads being picked up during wind events ▪ Hydrogen sulfide being released during high wind events and picked up by the saline pump ▪ Red tides forming near the pump inlet and being transported to the SCH ponds ▪ Maintenance of the trash racks to keep trash from entering the pump 	Please refer to the responses to ICFB-14, ICFB-20, ICFB-34, and ICFB-47.
Imperial County Farm Bureau	ICFB-81	Pond Location The photo/map on page 2-51 shows that the north end of the north pond at Wister Beach covers over 100 acres of private property owned by Al & Carson Kalin. The legal description of this property is: The west ½ section 34, township 10 south, range 13 east, San Bernardino baseline meridian. The southeast corner of this property is one mile west of the intersection of Davis and Spoony Road.	Please refer to the response to ICFB-53.
Imperial County Farm Bureau	ICFB-82	Agricultural Drainage and Natural Runoff According to the map/photo on page 2-51 there is no provision for an interceptor drain to pick up the drain water for IID Q, R, S, T, and U Lateral Drains or drainage from the Wister Ponds. According to the plan, they are blocked by the project's berm. The natural freshwater wetlands fed by these drains or Wister Ponds have no way to exit to the Salton Sea.	Please refer to the response to ICFB-74.
Imperial County Farm Bureau	ICFB-83	<p>3.11.2.5 Surface Water Hydrology</p> <p>Salton Sea</p> <p>Page 3.11-7, Lines 8-10 state: "These return flows have decreased in recent time, largely because of water transfers from Imperial Valley and resulting water conservation measures." This statement is incorrect. Water conservation measures resulting from the transfers out of the Imperial Valley will not begin until 2017, therefore water conservation measures have nothing to do with the decrease of return flows.</p>	Please refer to the response to IID-27.

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Imperial County Farm Bureau	ICFB-84	In the meantime as water is transferred out of the valley freshwater from the Colorado River is being added to the Salton Sea at the rate of 1 acre foot for every 2 acre feet transferred out of the Imperial Valley for the express purpose of stopping the Salton Sea from receding because of the water transfers. The addition of this mitigation water will end 2017 and on-farm conservation measures will supposedly take up the slack.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).
Imperial County Farm Bureau	ICFB-85	Less water is being delivered to the Salton Sea because of a long term drought, because crops are changing in the valley which require less water, and because irrigation methods of some crops are changing, resulting in no surface water and in some cases less subsurface water leaving the fields.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).
Imperial County Farm Bureau	ICFB-86	Alamo River The first sentence is incorrect. The Alamo River may have originated in the Mexicali Valley at one time, but since the All-American Canal was built in the 40's the Alamo River now originates at the south side of the All-American Canal on the eastern boundary of Calexico where a concrete control structure blocks its flow from Mexico. Any flow originating at this point is seepage from the All-American Canal. Tile drainage lines and field run-off dump into a pool at the base of the control structure and start their way towards the Salton Sea.	The text has been changed to reflect that the Alamo River begins at the All American Canal.
Imperial County Farm Bureau	ICFB-87	3.11.2.6 Surface Water Quality Sediment Page 3.11-13, last sentence. The flows listed for the New and Alamo Rivers are incorrect but the annual sediment loading is correct.	The flow numbers were reversed, but have been corrected. The average annual flow in the New River is 612 cfs and 845 cfs for the Alamo River.
Imperial County Farm Bureau	ICFB-88	3.11-18 Phosphorus Line 35 (Regarding phosphate levels in the New and Alamo Rivers) Line 35 states: "Nutrient concentrations have not decreased recently, despite TMDLs for total suspended solids and phosphorus or changes in agricultural practices (personal communication, C. Holdren Reclamation, 2010)." This statement by Chris Holdren, Reclamation, seems to contradict the monitoring done on the New and Alamo Rivers by Region 7 Regional Quality Control Board staff. SWAMP findings show tremendous reductions of phosphate loading in the New and Alamo Rivers. Shown below, are the graphs furnished by: Nadim Shukry-Zeywar, Senior Environmental Scientist TMDL Unit Chief CA Regional Water Quality Control Board Colorado River Basin Region 73-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260 SWAMP Phosphorous Data for the Alamo River and the New River	The statement has been removed. This does not change the impact analysis.

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		<i>[Graphs included in original letter are included in Attachment 1)]</i>	
Imperial County Farm Bureau	ICFB-89	Impacts on Agricultural Resources Of the six alternatives at the New and Alamo River Deltas, Alternatives 1 and 4 create the most negative impacts for Agriculture.	This is consistent with the conclusions of the Draft EIS/EIR. No text revisions are required.
Imperial County Farm Bureau	ICFB-90	First, the sedimentation ponds remove prime agriculture land from production in perpetuity. This is not the same as fallowing where agricultural land can easily be put back into production. In other words, the land is lost forever for producing food to feed our nation. Not only is there a loss of income to the farmer, there is also lost water sales to the IID and all the service providers that service the farmer with goods and services as well as the labor required to farm the field.	The loss of Important Farmland from construction of the upstream sedimentation basins is discussed in Section 3.2, Agricultural Resources, Impact AG-2. Land would be acquired only from a willing owner, who would be appropriately compensated. The upstream sedimentation basin would remove 60 acres of land from the more than 500,000 acres in production in Imperial County, which represents only 0.0014 percent of the average acreage of land fallowed between 2004 and 2009 (refer to Section 3.2, Agricultural Resources for additional detail). Any adverse economic impacts would be negligible. Socioeconomic benefits would result from the SCH Project, as discussed in Section 3.19, Impacts SOC-1, 2 and 3. Refer also to comment IID-1, which indicates IID's support for the SCH Project. No text revisions are required.
Imperial County Farm Bureau	ICFB-91	Secondly, the conveyance pipe lines will directly impact the farmability of agricultural land that they cross, perhaps making it impossible to farm those fields depending on their elevation.	Please refer to the response to ICFB-13.
Imperial County Farm Bureau	ICFB-92	All agricultural fields are leveled to allow surface irrigation water to flow across them ultimately ending up at the lowest point of the field. The conveyance lines may interrupt the flow of this water keeping the field from receiving water if the lines are above ground.	The brackish water pipeline would be buried, as indicated on page 2-16, lines 37-39. It would not completely surface until reaching the SCH ponds, at which point it would not be located at an agricultural field. No text revisions are required.
Imperial County Farm Bureau	ICFB-93	The majority of fields in the Imperial Valley have tile drainage lines, installed four to seven feet below the surface, to collect and remove the leached salts from the irrigation water. These underground lines are all tied together and installed at the correct slope, just like the levels of the fields, to allow the surface drain water and subsurface tile water to exit the field and into the IID drain ditch at the lowest point of the field. The conveyance lines crossing an agricultural field very well could disrupt the entire tile drainage system and make it impossible to leach salts from a portion of the field.	Please refer to the response to ICFB-13.
Imperial County Farm Bureau	ICFB-94	The third point is that Imperial Valley fields are worked up to 45 inches deep with massive rippers every year to help leach the salts down to the tile drainage lines. Any underground conveyance pipes crossing a farm field may keep the farmer from tilling his field as deep as he needs to.	Please refer to the response to ICFB-13.
Imperial County Farm	ICFB-95	As mentioned earlier in this report, the tremendous amount of soil removed from the planned sedimentation ponds would be the largest excavation of soil in agricultural history in the Imperial Valley. Absolutely no mention is made of what	Refer to the responses to ICFB-14 and 52 regarding the disposition of soil from the upstream sedimentation basin.

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Bureau		will be done with the excavated soil, almost two million cubic yards worth, or even how it is possible to dig below the five foot level without the heavy equipment becoming bogged down as liquefaction creates an unworkable excavation site. This is a major undertaking yet it is glossed over in this Draft EIS/EIR. In the description of the sedimentation basin for Alternative 4 there is even less information about the project than in the description for Alternative 1 which leaves one guessing about construction, location of the sedimentation pond or the route the pipe lines will take. Obviously there is a planned location for the two sedimentation ponds as well as a planned route for the pipe lines yet the amount of information included in the report is minimal to the point it leads one to believe it was done on purpose.	As discussed in Section 2.4.1.11, Brackish Water Pipeline, the final configuration of the brackish water pipeline would depend on topographic information, available right-of-way, and cost. The exact route that would be followed is not identified at this time because it would be dependent on the availability of land from willing owners and the ability to negotiate a lease or easement from such owners. The area in which the brackish water pipeline and associated diversion facilities could be located is shown on Figure 2-2. No text revisions are required.
Imperial County Farm Bureau	ICFB-96	Adding to these three problems is the fact that the location of both sedimentation ponds for Alternatives 1 and 4 are on land currently enrolled in the Williamson Act.	This is consistent with the conclusions of the Draft EIS/EIR. No text revisions are required.
Imperial County Farm Bureau	ICFB-97	Looking at all the major concerns listed above, the Imperial County Farm Bureau believes Alternatives 1 and 4 create significant and unavoidable impacts which may not be easily mitigated.	The issues raised by these comments were addressed in the Draft EIS/EIR, and the conclusions regarding the significance of impacts on agricultural resources remain unchanged. Such impacts were, however, factors that were considered in eliminating both Alternatives 1 and 4, which would require the construction of an upstream sedimentation basin and brackish water pipeline in agricultural areas, from consideration as the preferred alternative. No text revisions are required.
Imperial County Farm Bureau	ICFB-98	<p>3.2.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds</p> <p>Impact AG-1: Construction of the diversion and conveyance facilities and brackish water pipeline maintenance would temporarily disrupt agricultural production but would not permanently convert Farmland to nonagricultural use (less-than-significant impact).</p> <p>The construction and resulting conveyance pipelines would cause significant and unavoidable impact where the 220-foot right-of-way crossed producing agricultural land. The natural slope of the tile drainage systems would be disrupted. The conveyance lines would make it impossible to reroute the tile system while maintaining the correct slopes. IID drain ditches would also be affected and again the slopes and guaranteed outlet elevations for the tile system of adjoining field would be disrupted. If the buried conveyance lines crossed producing agricultural land the farmer would not be able to do the deep groundwork normally done to help leach salts downward and allow plant roots to grow unimpeded. Diverting a IID drain or tile system temporarily or permanently would be problematic. For these reasons the Imperial County Farm Bureau believes there would be a significant and unavoidable impact to agriculture.</p>	Please refer to the responses to ICFB-13.
Imperial	ICFB-99	Impact AG-2: Construction of the sedimentation basin would result in the	The text was clarified to indicate that approximately 500,000 acres are in

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County Farm Bureau		<p>permanent conversion of a small amount of Farmland to nonagricultural use (less-than-significant impact).</p> <p>60 acres would be permanently lost with the construction of the sedimentation pond. This Draft EIS/EIR argues that 60 acres is minimal compared to the 5,000,000 acres in production in the Imperial Valley. There are only 473,000 acres in production in Imperial Valley, not five million acres as stated. The Draft EIS/EIR goes on to argue that the 60 acres removed from agriculture is minimal compared to the 40-50 thousand acres of farmland that is fallowed yearly in Imperial Valley. Fallowing has nothing to do with trying to justify removing 60 acres in perpetuity from farming. Fallowed ground is ground that has been brought into production, leveled, tilled, ditches installed, and farmed at one time but is no longer being farmed. Fallowed ground can easily be farmed again just by tilling the soil, planting and irrigating. The same is not true of land removed from agricultural production in perpetuity. The Imperial County Farm Bureau believes there would be a significant and unavoidable impact to agriculture.</p>	<p>production, not 5,000,000. The discussion of fallowing was used to provide additional perspective on the loss of 60 acres of farmland. A substantial amount of land is taken out of production through fallowing each year in Imperial Valley, and the number changes annually. The amount of land that would be converted as part of the SCH Project under Alternatives 1 and 4 would be not only small in relation to the total area available, but also well under the annual variation in the amount of land that is fallowed each year. The conclusion regarding the significance of the impact is unchanged, although it should be noted that the loss of Farmland was one of the factors used to eliminate Alternatives 1 and 4 from consideration as the State's preferred alternative. No text revisions are required.</p>
Imperial County Farm Bureau	ICFB-100	<p>3.2.4.7 Alternative 4 – Alamo River, Gravity Diversion + Cascading Ponds Impact AG-1: Construction of the diversion and conveyance facilities and brackish water pipeline maintenance would temporarily disrupt agricultural production but would not permanently convert Farmland to nonagricultural use (less-than-significant impact).</p> <p>The construction and resulting conveyance pipelines would cause significant and unavoidable impact where the 220-foot right-of-way crossed producing agricultural land. The natural slope of the tile drainage systems would be disrupted. The conveyance lines would make it impossible to reroute the tile system while maintaining the correct slopes. IID irrigation and drain ditches would also be affected and again the slopes and guaranteed outlet elevations for the tile system of adjoining field would be disrupted. If the buried conveyance lines crossed producing agricultural land the farmer would not be able to do the deep groundwork normally done to help leach salts downward and allow plant roots to grow unimpeded. Diverting an IID drain or tile system temporarily or permanently would be problematic. For these reasons the Imperial County Farm Bureau believes there would be a significant and unavoidable impact to agriculture.</p>	<p>Please refer to the response to ICFB-13.</p>
Imperial County Farm Bureau	ICFB-101	<p>Impact AG-2: Construction of the sedimentation basin would result in the permanent conversion of a small amount of Farmland to nonagricultural use (less-than-significant impact).</p> <p>37 acres would be permanently lost with the construction of the sedimentation pond. This Draft EIS/EIR argues that 37 acres is minimal compared to the 5,000,000 acres in production in the Imperial Valley. There are only 473,000 acres in production in Imperial Valley, not five million acres as stated. The Draft</p>	<p>Please refer to the response to ICFB-99.</p>

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		EIS/EIR goes on to argue that the 37 acres removed from agriculture is minimal compared to the 40-50 thousand acres of farmland that is fallowed yearly in Imperial Valley. Fallowing has nothing to do with trying to justify removing 37 acres in perpetuity from farming. Fallowed ground is ground that has been brought into production, leveled, tilled, ditches installed, and farmed at one time but is no longer being farmed. Fallowed ground can easily be farmed again just by tilling the soil, planting and irrigating. The same is not true of land removed from agricultural production in perpetuity. The Imperial County Farm Bureau believes there would be a significant and unavoidable impact to agriculture.	
Imperial County Farm Bureau	ICFB-102	3.4.3.3 Wildlife Page 3.4-17 Lines 3-5 At the top of the page it states that the eared grebe population is the greatest in January with a peak of over 5,000 individuals. This statement is correct but the peak actually amounts to over 1 million individuals in some years and represents over 95% of the continental population according to the U.S. Fish and Wildlife Service.	The number of eared grebes found at the Salton Sea described in the Draft EIS/EIR is a subset of the Sea-wide census provided by USFWS (2010) and is restricted to the region that is in proximity to the SCH Project. Thus, the numbers reported on page 3.4-17, lines 3-5 are a subset of the number of birds that is present over the entire Salton Sea. No text revisions are required.
Imperial County Farm Bureau	ICFB-103	3.4.3.3 Wildlife Page 3.4-18 Lines 15-19 The black tern is most prevalent in July, August, and September and predominately feed on insects flying above farm fields being summer flooded to leach the salts down to the tile lines. (Al Kalin – Audubon California Imperial Valley Landowner Stewardship Program Coordinator 2009)	The prevalence of black tern in the vicinity of the SCH Project is correctly characterized in the Draft EIS/EIR. Point count data and the focused survey results from 2010 that are included in the Draft EIS/EIR reflect the occurrence of the black tern within the Project area (the shallow water adjacent to the Sea). The occurrence information does not reflect the species occurrence in or use of other areas within Imperial County (Imperial Valley farm fields). No text revisions are required.
Imperial County Farm Bureau	ICFB-104	Table 3.4.4 Special-Status Species Potentially affected by the SCH Project The potential to be present for the American peregrine falcon is high, not moderate as reported. The American peregrine falcon is a very common visitor to the New and Alamo River Delta year around. It is often found perched on the shady side of a power pole on the metal brace that braces the cross arm. Is also found perched on snags in the small bay east of the New River Delta where it feeds on waterfowl in the winter and nesting black-necked stilts in the spring and summer. Cattle egrets feeding on insects in irrigated bermudagrass fields are also a common prey for the American peregrine falcon. In the Alamo River area they are commonly seen around Obsidian Butte, Lookout Hill, Red Hill and perched on the power lines in the area, particularly along Davis Road. Again, the potential to be present is high. (Al Kalin – Audubon California Imperial Valley Landowner Stewardship Program Coordinator 2009)	The peregrine falcon was not observed during the surveys conducted for the SCH Project, and the species appears to be opportunistic in the use of the resources in the region. The literature review for the occurrence of the species indicates that it is a rare, perennial visitor that is encountered year-round, but not for breeding (Patten et al. 2003), as described in the Draft EIS/EIR. The USGS bird checklist for the Salton Sea National Wildlife Refuge describes the species abundance as “occasional” (USFWS 1993, updated 2006). Thus, while the American peregrine falcon is known to be present at the Salton Sea, it is not predictably present and forages there opportunistically. The evaluation of the species has been retained as “moderate” to reflect this unpredictable occurrence of the species. However, the analysis of impacts to this species would not change regardless of whether the potential for the species to be present is considered to be moderate or high. No text revisions are required.
Imperial County Farm Bureau	ICFB-105	The burrowing owl is a common resident of the New River Delta where it prefers to build its burrows and nest in the holes created by the large rock rip-rap used to armor the dike that separated the farmland from the Salton Sea between the New	Burrowing owls were addressed in the Draft EIS/EIR, and their presence was identified within the Project area (page 3.4-23). Impacts on burrowing owls were identified for each alternative and found to be significant, requiring the

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		River and Alamo Deltas. In some areas of the dike there are as many as three nesting pair per half mile. These owls must be inventoried and mitigated for during any construction. (Al Kalin – Audubon California Imperial Valley Landowner Stewardship Program Coordinator 2009)	implementation of Mitigation Measures BIO-2 and BIO-3. No text revisions are required.
Imperial County Farm Bureau	ICFB-106	<p>3.11-30 Line 18 Reduce the flow in a river to the detriment of downstream water users</p> <p>Reducing the flow of the rivers at the pumping stations or sedimentation basins will have a substantial impact on the velocity of the river downstream and create problems with silt/sedimentation fallout thus plugging the river and backing the water up. This action will back water into agricultural drains in Alternatives 1 and 4 and possibly submerge subsurface tile outlets with guaranteed elevations. The reduction of river flow will also lead to noxious vegetation taking over the channel if it is not kept dredged out.</p>	<p>The sediment concentration downstream of the diversion would remain the same with and without the diversion because the diversion would remove both water and sediment.</p> <p>While the river flow would be decreased, the sediment load that must be transported downstream would also decrease. Based on data collected for the design, problems associated with deposition downstream of the diversion building up to the extent that it would flood upstream drain lines are not anticipated.</p> <p>The statement that a reduction of river flow will lead to noxious vegetation taking over the channel if it is not kept dredged out is not correct. The SCH diversion would reduce the river flow from the diversion location to the river mouth where the water would be returned. This is a distance of about 1 mile for the pumped diversion and about 3 miles for the gravity diversion (see Section 2). The Project would, however, maintain a live stream downstream of the diversion at all times; thus, vegetation would not invade the channel bottom. The water surface would decrease somewhat (the amount would vary depending on the season), but the river banks are steep in the affected area, and the amount of newly exposed land would be minimal. No text revisions are required.</p>
Imperial County Farm Bureau	ICFB-107	3.11-30 Line 42 It is not clear what is meant by the sedimentation basin storing 6 feet of water.	The depth of water in the sedimentation basin would be about 6 feet. No text revisions are required.
Imperial County Farm Bureau	ICFB-108	3.11-31 Line 2 The last sentence states: “Because of these design elements, this criterion is not a Project impact and is not considered further.” It should be considered further! Building a sedimentation basin 15-20 below adjacent field levels right next to the rivers is an impossibility given the funding and scope of this project. The surrounding water tables will not allow for it. As stated previously, the enormous size of the excavations, the dewatering necessary, the disposition of the spoil from the project, all make the project ludicrous and certainly calls attention to the credibility of those that produced this draft document.	The criterion in question is whether the SCH Project would “raise the elevation of water in the IID drains, resulting in the backup of water into on-farm drains.” As discussed on page 3.11-31, lines 31-44 and page 3.11-32, lines 1-3, the Project would not. Please refer to the responses to ICFB-14 and ICFB-52 regarding the feasibility of constructing the upstream sedimentation basin. No text revisions are required.
Imperial County Farm Bureau	ICFB-109	<p>3.19.1.2 Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens</p> <p>High concentrations of birds in the ponds may lead to the higher bird populations in the vicinity of nearby Willey Reservoir, using that reservoir for loafing and fresh</p>	Please refer to the response to ICFB-3.

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		water. Their feces could very well increase the E. Coli counts in the irrigation water to the point where this irrigation water could cause leafy green vegetables to be rejected by the marketing order. A very high proportion of the acres around the New River produce leafy green vegetables as well as broccoli, cauliflower, celery, melons, and sweet corn because of the warm micro-climate created by the Salton Sea. 15% to as high as 35% of the water used to grow these crops is pumped from the Willey Reservoir and mixed with water of the Vail Main canal. A very large portion of the fields irrigated by Vail Laterals 1 through 7 off the Vail Main produce leafy green vegetables. The threat of high E. Coli counts in the irrigation water as a result of this project directly affects agriculture and must be mitigated.	
Imperial County Farm Bureau	ICFB-110	<p>Affected Environment, Impacts, and Mitigation Measures</p> <p>3.19.3.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds</p> <p>Impact SOC-1: Project construction and operations would cause an increase in local employment (beneficial impact)</p> <p>It is doubtful that this project would generate many jobs for local workers. Although Table 3.19-2 shows a pool of 4,700 available construction workers it is doubtful very many are qualified to operate heavy machinery which is where the majority of help is needed. Currently the work on the third phase of the Brawley By-Pass has required hundreds of trucks to haul fill dirt for the road and overpass. The majority of these trucks being used have out of county names on their doors. One can only assume the same will be true during construction of this project and very few from Imperial Valley will be employed.</p>	<p>As discussed in Section 3.19.3.1, it was assumed that heavy equipment would likely be brought in from the San Diego area, and some specialized equipment, such as clamshell derricks, tractor scraper units, and excavators, could come from either the San Francisco Bay Area or the Sacramento area.</p> <p>It is reasonable to assume that more generalized construction jobs would come from the local area, which has a large labor pool. No text revisions are required.</p>
Imperial County Farm Bureau	ICFB-111	<p>Impact SOC-5: The SCH Project would result in the temporary loss of agriculture revenue due to construction and maintenance activities in the water pipeline right-of-way (less-than-significant impact).</p> <p>The loss to agriculture, with the construction of the sedimentation pond and pipe line would not be temporary.</p>	Please refer to the responses to ICFB-90.
Imperial County Farm Bureau	ICFB-112	<p>Impact SOC-6: Pipeline construction would require the temporary disruption of Agricultural drains and canals (less-than-significant impact).</p> <p>As stated earlier, it can be assumed that the brackish water pipelines eventually would have to rise above the level of the tile drainage lines and eventually the farm fields they are crossing to reach the SCH ponds at the correct elevation. That means these pipelines would end up cutting any farm fields as well as the subsurface drainage lines in half and making it near impossible to farm the field while maintaining the required slope of the land as well as the slope and guaranteed outlet elevation of the tile drainage system.</p> <p>The loss of farmland in perpetuity means the loss of tax revenue to the county,</p>	Please refer to the response to ICFB-13 and ICFB-90.

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		<p>loss of revenue to farmers, as well as agricultural service providers such as seed companies, fertilizer companies, pesticide companies, tractor companies, hardware stores, custom harvesters including hay and grain, and just as importantly the loss of income from the sale of water and loss to laborers. Water sales help pay for the maintenance of canals and drains that service the area near the proposed sedimentation pond and brackish water pipeline.</p> <p>There appears to be no impact noted for the loss of farm land and how that affects the local economy in an area that prides itself in feeding the nation.</p>	
Imperial County Farm Bureau	ICFB-113	<p>3.19.3.7 Alternative 4 – Alamo River, Gravity Diversion + Cascading Ponds Impact SOC-1: Project construction and operations would cause an increase in local employment (beneficial impact)</p> <p>It is doubtful that this project would generate many jobs for local workers. Although Table 3.19-2 shows a pool of 4,700 available construction workers it is doubtful very many are qualified to operate heavy machinery which is where the majority of help is needed. Currently the work on the third phase of the Brawley By-Pass has required hundreds of trucks to haul fill dirt for the road and overpass. The majority of these trucks being used have out of county names on their doors. One can only assume the same will be true during construction of this project and very few from Imperial Valley will be employed.</p>	Please refer to the responses to ICFB-110.
Imperial County Farm Bureau	ICFB-114	<p>Impact SOC-5: The SCH Project would result in the temporary loss of agriculture revenue due to construction and maintenance activities in the water pipeline right-of-way (less-than-significant impact).</p> <p>The loss to agriculture, with the construction of the sedimentation pond and pipe line would not be temporary.</p>	Please refer to the responses to ICFB-90.
Imperial County Farm Bureau	ICFB-115	<p>As stated earlier, it can be assumed that the brackish water pipelines eventually would have to rise above the level of the tile drainage lines and eventually the farm fields they are crossing to reach the SCH ponds at the correct elevation. That means these pipelines would end up cutting any farm fields as well as the subsurface drainage lines in half and making it near impossible to farm the field while maintaining the required slope of the land as well as the slope and guaranteed outlet elevation of the tile drainage system.</p>	Please refer to the response to ICFB-13.
Imperial County Farm Bureau	ICFB-116	<p>Impact SOC-6: Pipeline construction would require the temporary disruption of Agricultural drains and canals (less-than-significant impact).</p> <p>As stated earlier, it can be assumed that the brackish water pipelines eventually would have to rise above the level of the tile drainage lines and eventually the farm fields they are crossing to reach the SCH ponds at the correct elevation. That means these pipelines would end up cutting any farm fields as well as the</p>	Please refer to the response to ICFB-13.

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		subsurface drainage lines in half and making it near impossible to farm the field while maintaining the required slope of the land as well as the slope and guaranteed outlet elevation of the tile drainage system.	
Imperial County Farm Bureau	ICFB-117	As noted for Alternative 1 there appears to be no impact noted for the loss of farm land and how that affects the local economy in an area that prides itself in feeding the nation.	Please refer to the response to ICFB-90.
Imperial County Farm Bureau	ICFB-118	The loss of farmland in perpetuity means the loss of tax revenue to the county, loss of revenue to farmers, as well as agricultural service providers such as seed companies, fertilizer companies, pesticide companies, tractor companies, hardware stores, custom harvesters including hay and grain, and just as importantly the loss of income from the sale of water. Water sales help pay for the maintenance of canals and drains that service the area near the proposed sedimentation pond and brackish water pipeline.	Please refer to the response to ICFB-90.
Imperial County Farm Bureau	ICFB-119	Figure 3.20-3 Road Network around the New River At 2.4.2.11 it was pointed out that the access route to Alternatives 1, 2, and 3 were incorrect. Figure 3.20-3 shows a map with an entirely different route to access Alternative 1, 2, and 3 and it too is incorrect. The map shows the route leaving Highway 78/86 at McNearny Road. This is impossible since McNearny Road does not connect to Highway 78/86.	Please refer to the response to ICFB-41.
Imperial County Farm Bureau	ICFB-120	In addition, there is no mention of traffic impact to the proposed construction site for the sedimentation basin or the mitigation measures needed.	The sedimentation basins associated with Alternatives 2, 3, 5, and 6 would be adjacent to the ponds. As discussed in Section 2.4.2.4, Construction Staging Areas, staging areas located outside the public right-of-way would be established near the upstream diversion under Alternatives 1 and 4 through easements with the landowner. A limited number of trips would be required to access the upstream staging area and would rely on sparsely traveled local roads. No mitigation measures would be required. No text revisions are required.
Imperial County Farm Bureau	ICFB-121	3.20.3.7 Alternate 4 – Alamo River, Gravity Diversion + Cascading Ponds The construction of the sedimentation basin and multiple pipe lines are not even mentioned or considered. There is nothing discussed regarding the movement of hundreds of thousands of cubic yards of soil and where the spoil would be put. In addition there will be miles of pipe lines that will pose serious impacts during construction as well as after construction since the pipe lines would be crossing ag land, ag tile drainage systems, private canals and drains, IID canals and drains, county roads and geothermal pipe lines.	Section 3.20 addresses transportation impacts from construction and operations in conformance with the significance thresholds established by the CEQA Guidelines. Such impacts were addressed in detail in Section 3.20.3.4, under Alternative 1 and the impacts of other alternatives were described in relation to those that would occur under Alternative 1. Impact TRAN-1 addresses impacts from increased vehicular traffic in general, Impact TRAN-2 addresses impacts from pipeline construction, and Impact TRAN-3 addresses impacts on emergency services. Constructing the sedimentation basin, which would be located either immediately adjacent to the ponds or on agricultural land, would not have additional impacts. Soils would not be disposed of in an area that would affect traffic. Other impacts from construction are discussed in their respective sections (e.g., 3.2, Agricultural Resources; 3.11, Hydrology and Water Quality; 3.13, Land

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			Use; and 3.19, Socioeconomics). No text revisions are required.
Imperial County Farm Bureau	ICFB-122	4.3.6 Energy Consumption Line 42 – How does this project produce electrical energy as stated?	The statement referred to electrical power generated by other projects considered in the cumulative impact analysis, not the SCH Project. No text revisions are required.
Imperial County Farm Bureau	ICFB-123	Line 44 – States diesel powered pumps will be used to deliver saline water to the projects. Everywhere else in the Draft EIS/EIR it talks about electrical pumps being used. The efficiency of the saline pump will be low if the three pumps used on the Willey Reservoir are any indication and would create a significant impact in the operational and management costs of the project. Diesel pumps also generate great quantities of air pollution.	The referenced text was corrected to indicate that the pumps would be powered by electricity.
CalEnergy	CE-1	CalEnergy owns and operates ten existing geothermal electricity generating plants within the Salton Sea Known Geothermal Resource Area (SSKGRA) located in the vicinity of the southern shore of the Salton Sea. These facilities provide 342 megawatts (MWs) of reliable low-cost base-load renewable power. CalEnergy's current development plan of an additional 470 MWs of generating facilities at the Salton Sea will help California meet its Renewable Portfolio Standards (RPS) goals of 33% by 2020.	This comment is noted. This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). No text revisions are required.
CalEnergy	CE-2	CalEnergy generally supports the Agencies' initiative to develop the Species Conservation Habitat (SCH) projects to restore shallow water habitat lost due to the ongoing increasing salinity and receding shoreline of the Salton Sea. While these projects will be a significant first step to provide habitat for both fish and bird species dependent on the fragile Salton Sea ecosystem; these projects overlap in part with the valuable known geothermal resource that also occupies the southern shore of the Salton Sea. If built as proposed, these ponds would restrict and possibly deny access to the geothermal reservoir and thus deeply hamper and even in some cases eliminate future development of renewable geothermal energy.	CalEnergy's general support for the SCH Project is noted. Please refer to Master Response 8, Compatibility with Geothermal Development. As indicated in this master response, the lead agencies intend to work cooperatively with geothermal development companies to minimize conflicts with future development. The commenter does not provide any evidence, nor was evidence provided at the meetings held with geothermal development companies and IID that statement that the proposed ponds would restrict or possibly deny access to the geothermal reservoir, either hampering or eliminating future development of renewable geothermal energy. No text revisions are required.
CalEnergy	CE-3	A review of the draft EIS/EIR document identifies and acknowledges the existence of the SSKGRA; however, the EIS/EIR contains no detailed discussion or supporting documentation of limits of the SSKGRA. Nor does the draft EIS/EIR discuss the published limits of the Salton Sea geothermal reservoir. Both these outlines should have been overlay on the proposed Alternatives. To that end we offer Figures 1, 2 and 3. Figure 1 shows the limits of the SSKGRA, as defined by the United States Geological Survey, and the two proposed EIR/EIS SCH project sites associated with the New and Alamo Rivers. Figures 2 and show the proposed limits of the Salton Sea geothermal reservoir overlaid on the EIR/EIS SCH project sites.	The limits of the Salton Sea KGRA, overlaid by the six Project alternatives, were shown on Figure 3.13-3. The outline of the Salton Sea Shallow Thermal Anomaly has been added to this figure, although this does not affect the conclusions of the EIS/EIR. Sufficient information is included in Sections 3.13.3.4 and 3.13.3.5 regarding geothermal energy production to support the impact analysis.

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CalEnergy	CE-4	Figure 1 displays the limits of the SSKGRA, which is approximately 136 square miles in size and covers most of the southern area of the Salton Sea, both on and off shore. The limits of the SSKGRA overlap on about one-half of the proposed New River SCH sites (Alternatives 1-3) and all of the proposed Alamo River SCH sites (Alternatives 4-6). Figure 1 further shows the proposed limits of the Salton Sea geothermal reservoir, as estimated by shallow thermal gradients (modified from figure 6 in Hulen, Kaspereit, Norton, Osborn, and Pulka, 2002, Refined Conceptual Modeling and a New Resource Estimate for the Salton Sea Geothermal Field, Imperial Valley, California, Geothermal Resources Council Transactions, Vol 26, p. 29-36). A copy of the reference paper is provided as attached to these comments. The proposed limits of the geothermal reservoir is about 34 square miles and is currently the best estimate of where the existing and potential limit of the Salton Sea geothermal reservoir.	Please refer to the response to CE-3.
CalEnergy	CE-5	<p>Figures 2 and 3 are a more detailed display of the limits of the Salton Sea geothermal reservoir overlain on the two proposed EIR/EIS SCH project sites. Specifically note how all but a small part of the most eastern-portion of the New River SCH Alternatives 1-3 area is within this boundary, whereas virtually all of the Alamo River SCH alternatives are within the geothermal resource estimate. CalEnergy believes that this type of analysis should have been included in the EIR/EIS to give the stakeholders a clear view of how the proposed alternatives will impact development of renewable geothermal energy.</p> <p>CalEnergy notes that the draft EIS/EIR lacks any of the supporting documentation which detailed the discussions and input from the geothermal industry operators in and around the Salton Sea geothermal field. In addition, there is no discussion of how the alternatives, placed in the middle of the projected geothermal field and on land under lease for geothermal development, were designed to accommodate expected impacts typically associated with development, construction, and operation of a geothermal power plant that would now be adjacent to a SCH. The deficiency is improper and should be rectified.</p>	Please refer to Master Response 8, Compatibility with Geothermal Development. Most of the proposed pond sites associated with Alternatives 1-3 would be outside of the KGRA; the rectangular shape outlined in red is merely the area in which facilities such as water pipeline associated with the gravity diversion for Alternatives 1 and 4, power lines, and temporary staging areas would be located. As indicated in Figure 3, provided by CalEnergy, and the revised Figure 3.13-3, virtually all of the Alternatives 1-3 pond sites are outside of the geothermal reservoir. No text revisions are required.
CalEnergy	CE-6	Specifically, CalEnergy will not support and will object to any habitat designed, proposed or permitted associated with the Alamo River area. Of the six alternative habitats presented: Alternatives 4, 5, and 6 are associated with the Alamo River. These proposed Alternatives are located predominately on Imperial	Please refer to Master Response 8, Compatibility with Geothermal Development. As indicated, it is the intent of the SCH agencies to work cooperatively with IID and geothermal development companies to minimize the potential for conflicts with future geothermal development, and based on multiple meetings with these

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		Irrigation District (IID) mineral and surface interest lands where CalEnergy has a current and active geothermal mineral lease. CalEnergy is working with the IID to develop these lands for renewable geothermal energy, as outlined in the lease. The SCH Alternatives 4-6 would greatly hamper or even halt our ability to develop renewable energy from these lands. Even if SCH projects were proposed and permitted but never constructed in the Alamo River area, the very existence of permits could, in the eyes of regulatory and financial agencies, throw into doubt that any overlapping geothermal development could exist in the same area.	entities, no unavoidable areas of incompatibility were identified. The comment that "the SCH Alternatives 4-6 would greatly hamper or even halt our ability to develop renewable energy from these lands" and concerns about permitting, but not constructing the SCH Project at the Alamo River are not supported by substantial evidence. As discussed in Master Response 8, however, the presence of geothermal resources was one of the factors used in eliminating sites near the Alamo River in selecting the State's preferred alternative. No text revisions are required.
CalEnergy	CE-7	Due to these likely adverse impacts on the development of renewable energy in the Alamo River area, CalEnergy proposes insertion to the EIS/EIR report that there is to be a moratorium of thirty years, from 2011 to 2041, before any habitat project is built within the limits of the Salton Sea geothermal field (as defined by Hulen and others, 2002) and specifically in the Alamo River area.	Such a moratorium is not supported by the impact analysis, which concludes that the SCH Project (all alternatives) would be designed to minimize conflicts with future geothermal development and that such an impact would be less than significant. The State's preferred alternative does not include constructing habitat in the Alamo River area. As shown on the revised Figure 3.13-3, only a small portion of Alternatives 1-3 is within the limits of the geothermal field.
CalEnergy	CE-8	The eastern-most portions of Alternatives 1, 2, and 3 also may impact CalEnergy's and the IID's ability to utilize the renewable resource. The eastern-most portion encroaches on the boundary of CalEnergy's existing field operations and our offshore expansion. CalEnergy would support a modified version of Alternatives 1, 2, and 3 if the habitats were scaled back to only occupy the shoreline west of the New River. It is CalEnergy's understanding that the Natural Resources Agency's preferred Alternative 3 is proposed to be phased construction and that the initial pond would satisfy this "west of the New River" concept. In addition, it was discussed at the Palm Desert meeting on September 15, 2011, that current funding in place would cover the construction costs of this initial pond and that any further phases would seek significant additional funding.	Please refer to Master Response 8, Compatibility with Geothermal Development. The SCH Project is not a phased project. It is proof-of-concept project that is intended to test concepts that could inform future restoration efforts should funding become available. Funds are not available for larger restoration projects at this time. No text revisions are required.
CalEnergy	CE-9	While CalEnergy will support a modified preferred Alternative 3 habitat, we are concerned that implementation of the permitting process of all the alternative sites will create unnecessary regulatory/permitting barriers associated with the future development of the SSKGRA. Therefore, as previously discussed, CalEnergy requests that any permitting effort should only include the preferred Alternative 3, modified to exclude SCH east of the New River.	Permit applications only are submitted for the State's preferred alternative (Alternative 3), not for all of the alternative sites. The permit applications use the configuration shown in this EIS/EIR, which shows the area of maximum impact, but the decision makers will consider this comment before approving the SCH Project and proceeding with the final design. No text revisions are required.
CalEnergy	CE-10	Finally, an opportunity for project sponsors to participate in the continued phased development of Alternative 3 to provide impact mitigation has been overlooked. Presently, in the draft EIS/EIR there is no administrative mechanism available for project sponsors to take advantage of this type of "in lieu" of mitigation. Nor is there an administrative mechanism for mitigation "banking". Any permitting of the preferred Alternative 3 should require a clearly defined administrative mechanism for both "in lieu" mitigation and "banking".	The SCH Project is not being developed as mitigation for other projects, including future projects. As discussed on page 1-4, lines 8-14, the California Legislature appropriated funds for the purpose of implementing "conservation measures necessary to protect the fish and wildlife species dependent on the Salton Sea, including adaptive management measurements" (California Fish and Game Code section 2932(b)). The SCH Project, therefore, is a restoration project proposed by the Natural Resources Agency in order to (1) develop a range of aquatic habitats

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			that will support fish and wildlife species dependent on the Salton Sea; and (2) develop and refine information needed to successfully manage the SCH Project habitat through an adaptive management process. The State is not creating an in-lieu fee program or mitigation bank, nor would the SCH Project be implemented in phases.
CalEnergy	CE-11	CalEnergy commends the California Natural Resources Agency, U.S. Army Corps of Engineers, Department of Fish and Game, and Department of Water Resources staffs in their efforts to take this initial step and stands ready to support this process by participating in stakeholder initiatives as necessary.	CalEnergy's offer of support is noted; as indicated in Master Response 8, should the SCH Project be approved, the design would continue to be coordinated with IID and geothermal development companies, as well as through specific provisions established through the lease agreement with IID for use of its land.
Pacific Institute	PI-1	The proposed SCH project is the most recent incarnation of the PEIR's Period 1 'early start habitat.' We strongly support the construction of such shallow pond habitat. This current project DEIR comes more than four years after the completion of the PEIR; it is long overdue.	The Pacific Institute's support for the SCH Project is noted.
Pacific Institute	PI-2	<p>1. We strongly support the construction of shallow pond habitat around the Salton Sea.</p> <p>Unfortunately, the DEIR provides insufficient information for us to determine whether the proposed project will work as intended. Aside from uncertainty as to whether legal rights to divert water from the New or Alamo river can be secured for the project, the DEIR does not assure us that the proposed project will produce fish in sufficient numbers to provide an adequate forage base for piscivorous birds – the project's stated purpose. Neither the description of the alternatives, nor the subsequent environmental analyses, nor any of the appendices include information on projected fish production rates or harvest rates. Section 3.4 states that fish and invertebrates may suffer from seasonal or even daily mortality, due to low concentrations of dissolved oxygen (DO) and low temperatures, but does not offer any estimates of the magnitude of these mortality events or describe how this periodic mortality will affect the overall ability of the project to meet its goals. Section 2.0 describes the alternatives' structure but not their operation or ability to achieve their stated function. Although the Reclamation/USGS pilot ponds unintentionally produced very high numbers of desert pupfish, they were small shallow ponds that may not have been representative of conditions at the deeper, larger SCH project. In any case, the comparison between the pilot ponds and the proposed project should have been made explicitly in the DEIR. The function of the ponds, including steps that might need to be taken to improve DO concentrations and avoid lowering winter water temperatures below the tolerance of tilapia (threats noted on p. 3.4-48), should be clearly described in the alternatives section. Simply deferring such decisions to future adaptive management is insufficient assurance that these potential fatal flaws can be overcome and limited Salton Sea funds spent on a</p>	<p>The Pacific Institute's support for the construction of shallow ponds is noted. Please refer to Master Response 6, Water Rights regarding the legality of the SCH Project's right to divert water from these rivers.</p> <p>Sufficient information is included in the Draft EIS/EIR to allow a thorough assessment of the impacts of the SCH Project. As required by NEPA (40 CFR section 1502.2) and CEQA (CEQA Guidelines sections 15143 and 15147), EISs and EIRs are intended to be concise documents that focus primarily on the significant impacts of the Project.</p> <p>As discussed in Section 2.4, Features Common to all Alternatives, the SCH Project is a proof-of-concept project that is intended to test several project features, characteristics, and operations under an adaptive management framework. The proof-of-concept period would last for approximately 10 years after completion of construction (until 2025). By that time, managers would have had time to identify those management practices that best meet the Project goals. The Draft EIS/EIR does not claim to know how to best operate the SCH ponds at this time. This would be determined through the monitoring and adaptive management process.</p> <p>Nevertheless, the Draft EIS/EIR contains adequate information on the process that would be used to monitor the ponds and modify conditions as needed. As discussed on page 2-10, lines 28-32, the experimental SCH ponds are being designed to be operated as a proof-of-concept project. Production of a fish population would be evaluated through monitoring and adaptive management because changes in environmental variables that affect fish production are not easily predictable (refer to Section 2.4.4 and Appendix E for additional details regarding the monitoring and adaptive management aspects of the Project).</p>

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		project that might not achieve its stated goals.	<p>Fish production rates or harvest rates have not been included because they are not known, and an EIS/EIR is not required to speculate. Similarly, the magnitude of fish and bird die-offs, which might occur, cannot be estimated. If they did occur, this would provide information that could be used to manage the ponds in a different way. This is consistent with Goal 2, which is "develop and refine information needed to successfully manage the SCH Project habitat through an adaptive management process."</p> <p>Operations are outlined in Section 2.4.3, and Appendix D provides examples of the range of operations for the SCH Project.</p> <p>The Reclamation/USGS ponds are introduced in Section 1.6, Development of the Salton Sea Species Conservation Habitat Project. As discussed on page 1-8, lines 7-8, the concept of SCH evolved from the ideas and concepts developed through this and other projects. The Reclamation/USGS ponds were a source of information for the development of the SCH Project, but it is not the focus of the Draft EIS/EIR, and an explicit comparison between the pilot ponds and the SCH Project is not required.</p> <p>No text revisions are required.</p>
Pacific Institute	PI-3	2. The DEIR neglects to provide any information on costs. How much would it cost to construct each alternative? What are the projected annual operations & maintenance costs of each alternative?	Please refer to Master Response 5, Project Costs.
Pacific Institute	PI-4	How much money is currently available? What additional funds might be obtained? Can the alternatives be scaled back, if full funding is not available? How will this affect the adverse and beneficial impacts analyses?	Please refer to Master Response 4, Project Funding. The alternatives could be scaled back if full funding were not available. Impacts, both adverse and beneficial, would be reduced were this to occur.
Pacific Institute	PI-5	3. The selection of Alternative 3 as the preferred alternative appears to be pre-decisional, both because of the criteria used to justify the decision (e.g., because it is the largest alternative) and especially because the agencies apparently are already in the 75% design phase for this alternative, even before the comment period has closed and well before the agencies have had the opportunity to review public comments.	<p>The commenter states that the Draft EIS/EIR's characterization of Alternative 3 as the "preferred alternative" is inappropriately "pre-decisional" under CEQA due to: (1) the criteria that the commenter asserts the Natural Resources Agency used to justify the alleged conclusion; and (2) the amount of design work that has been completed.</p> <p>A. The Natural Resources Agency Relied Upon Appropriate Criteria for its Preliminary Identification of Alternative 3 as a Preferred Alternative.</p> <p>As an initial matter, commenter mischaracterizes the basis for the Natural Resources Agency's identification of Alternative 3 as its preferred alternative at the outside of environmental review. The commenter asserts that the sole basis for the Natural Resources Agency's identification of Alternative 3 as the preferred alternative is that Alternative 3 "is the largest alternative." In fact, the Draft EIS/EIR's Executive Summary sets forth the reasons for the Natural Resources Agency's initial identification of Alternative 3 as the preferred alternative. Those reasons include the Natural Resources Agency's preliminary theory at the outset</p>

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			<p>of the environmental review process that Alternative 3 would provide greater long-term benefits by restoring the greatest amount of habitat, while minimizing environmental impacts to the extent feasible. See Draft EIS/EIR at ES-21.</p> <p>The environmental analysis thus far confirms the Natural Resources Agency's preliminary hypothesis. Of the Project alternatives, those that would require gravity diversion of water from the New or Alamo rivers (Alternatives 1 and 4, respectively) were not considered environmentally superior because construction of the sedimentation basin would result in the permanent loss of Important Farmland and the potential conversion of land under Williamson Act contracts to nonagricultural use, which would be a significant impact. These impacts would not occur under the alternatives requiring pumped diversion (Alternatives 2, 3, 5, and 6) because the sedimentation basins would be located within the footprint of the SCH ponds, which would not be constructed on farmland. Of Alternatives 2, 3, 5, and 6, those located at the Alamo River (Alternatives 5 and 6) were not considered environmentally superior for a variety of reasons. Alamo River water includes higher levels of selenium than that of the New River. Although impacts from selenium would be less than significant, selenium would have adverse effects on wildlife, and lower levels would be preferable within the SCH ponds. Similarly, the Alamo River area is more geologically active than the New River area (mud pots are present adjacent to and within the Project area east of the Alamo River in Morton Bay), which could lead to an increased risk of berm failure. Although this impact is not considered significant, it would not be desirable and would result in temporary, but adverse impacts on SCH pond operation. The Alamo River area also is in a KGRA and known geothermal resources diminish west of the New River. Although the SCH Project would not preclude geothermal development, the New River area is considered preferable because the potential for conflicts with geothermal development companies would be minimized. Thus, Alternatives 5 and 6 were, and continue to be, eliminated from consideration as the environmentally superior alternative.</p> <p>Alternatives 2 and 3 would be located at the New River and would restore 2,670 and 3,770 acres of habitat respectively. Alternative 3 would cause somewhat greater impacts during construction (and indirect air emissions during operations), but it would have greater long-term benefits because more habitat would be restored. The long-term benefits would offset the short-term, incremental increase in construction impacts (and incremental increases in power demand), and thus, Alternative 3 was, and continues to be, considered the environmentally preferable/environmentally superior alternative, which in turn provided the foundation for the Natural Resources Agency's identification of Alternative 3 as its preferred alternative.</p> <p>B. The Natural Resources Agency Properly Identified Its Preferred</p>

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			<p>Alternative as the Agency Embarked Upon the Environmental Review, Engineering, and Budgeting Processes Without Foreclosing Consideration of Other Alternatives.</p> <p>The Natural Resources Agency's identification of a preferred alternative at the outset of environmental review properly disclosed the Natural Resources Agency's perspective at that point in the planning and decision-making process. Under CEQA, the critical question is whether, considering all the circumstances, the Natural Resources Agency has committed itself to the project so as to effectively preclude any alternatives or mitigation measures that CEQA would otherwise require to be considered, including the alternative of not going forward with the project. Here, the 75 percent preliminary design work to which commenter refers does not foreclose consideration of any of the alternatives. The preliminary design work was for an alternative up to – not limited to - 3,770 acres. The 75 percent design work has generated multiple berm designs in response to variable soil types and geotechnical conditions. These soil types would need to be accommodated at all the sites, just in different proportions at each site. The 75 percent design work also included soil samples at both the New River and Alamo River sites.</p> <p>Moreover, it remains entirely possible that at the close of environmental review, engineering, budget processes, the Natural Resources Agency could end up selecting the "no project" alternative. With the exception of the "no project" alternative," the financing for any of the alternatives remains uncertain and subject to approvals of budget change proposals and appropriations. Before final approval of the proposed project, the Army Corps of Engineers must complete its jurisdictional delineation of wetlands at all of the sites. In addition, negotiations with IID to access land for the project must be completed before the project can go forward.</p> <p>No text revisions are required.</p>
Pacific Institute	PI-6	<p>4. The preferred alternative could divert more than 50% of the total historic flow of the New River during June, the peak evaporation month. Aside from the fact that future New River flows will be significantly lower in the future, due to water transfers and water conservation efforts in the Imperial Valley and further reductions in flows from Mexico, diverting more than half of the river's flow raises many questions. In addition to the immediate environmental impacts (to the river and riparian corridor downstream and to the estuary formed at the river's mouth), this diversion suggests that a maximum of 7,000 acres of shallow habitat could be constructed near the New River, and perhaps 10,000 acres near the Alamo River, given the volume of water available during June. If this is accurate, what does it say about long-term mitigation strategies for the Salton Sea? Would it be permissible to divert the entire flow of the New River to deliver water to</p>	<p>Please refer to the response to SSA-7.</p> <p>The State's preferred alternative does not represent the maximum amount of habitat possible, but rather the maximum at the New River site above the -234 foot contour.</p> <p>The operations and adaptive management plans would identify the diversion strategies during the year to make best use of the available water while minimizing the in-river impacts. That is why the Project does not propose to divert the entire flow of the New River (or the Alamo River), nor would the Project seek such a diversion.</p> <p>The comments regarding the maximum number of acres that could be constructed and long-term mitigation strategies are not substantive comments</p>

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		constructed habitat? Or does the preferred alternative represent, in effect, the maximum amount of constructed habitat feasible near the New River?	that address significant environmental issues evaluated in the Draft EIS/EIR, and no text revisions are required.
Pacific Institute	PI-7	We strongly support the construction of shallow habitat pond complexes at the Salton Sea. However, the DEIR does not provide sufficient information to determine whether the preferred project would be an effective use of limited Salton Sea funds. More and better information is needed.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).
Pacific Institute	PI-8	The DEIR should review a broad range of construction techniques, management strategies, habitat types, salinities, and target species. It would be a waste of time and money to test one limited concept, when it is clear that the Sea will require a portfolio of restoration strategies and techniques.	Please refer to Master Responses 3, Project Scope and 7, Operations and Adaptive Management regarding the range of management strategies, habitat types, salinities, and target species. Construction techniques would be selected to be most feasible and cost effective in achieving project design. As discussed on page 2-23, lines 13-17, the soils lack the structural capability to support construction equipment, and specialized equipment would be needed. No text revisions are required.
Pacific Institute	PI-9	The DEIR should clearly and explicitly define what is meant by "restoration" for this project, given the absence of a stable baseline or historic condition.	The Project goals and objectives are detailed in Section 1, CEQA Project Goals and Objectives/NEPA Purpose and Need. The SCH Project does not seek to restore conditions to a specific point in time; rather, it is intended to provide in-kind replacement for near-term habitat losses (refer to page 1-4, line 18). No text revisions are required.
Pacific Institute	PI-10	ES-1: 28 "The Salton Sea is currently a hypersaline ecosystem (about 51 ppt)" Slide 5 of the Public Comment Meeting Presentation posted on the Salton Sea program webpage at http://www.water.ca.gov/saltonsea/docs/081711DEIS_EIRcomment_meeting.ppt states that the salinity is 53 ppt. Note that both of these values are wrong: at brackish and higher salinities, g/L TDS (as reported by C. Holdren) are not interchangeable with ppt TDS. The reported salinity of the Sea, at 51.8 g/L, converts to roughly 49.3 ppt, not >50 ppt.	The referenced text from the Draft EIS/EIR appropriately describes conditions as they existed when the Notice of Intent and Notice of Preparation were published. The Salton Sea is a dynamic environment, however, and conditions had changed by the time the public comment meeting was held; the slide in question was intended to demonstrate the need for the SCH Project and showed the salinity level that existed at the time of the meeting in relation to future conditions, including the point at which tilapia are no longer expected to survive. Regardless, the descriptions of salinity are a fair approximation of the status of the waters at the Salton Sea, and the minor discrepancy in units (49.3 ppt versus 51 ppt) does not change the impact analysis or conclusions. The Salton Sea is currently hypersaline, is more saline than in the past, and will continue to become saltier in the future. No text revisions are required.
Pacific Institute	PI-11	ES-1: 29-31 "Without restoration, declining inflows in future years will result in the Sea's ecosystem collapse due to increasing salinity (expected to exceed 60 ppt by 2018, which is too saline to support fish)" This statement contains the following errors: 1) the premise that there is any possibility of "restoration" of the Salton Sea as a whole is demonstrably false (and has yet to be defined in this document);	The referenced statement is true—without restoration, the Salton Sea will collapse due to increasing salinity. The statement does not address the feasibility of restoring the Sea, nor is there a requirement in this instance to define what restoration of the Sea might entail. The Draft EIS/EIR appropriately focuses on the impacts of the SCH Project, not restoration of the entire Salton Sea. No text revisions are required.

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		2) the Court's invalidation of the Quantification Settlement Agreement (QSA) and the current appeal of that decision mean that the water transfer and future mitigation water deliveries remain uncertain; and	Please refer to ICAPCD-1.
		3) categorical determinations of the salinity tolerance of the fish in the Sea have been wrong for more than 40 years and should not be made here. Desert pupfish have demonstrated salinity tolerance well in excess of 60 ppt. Table 3.4-3 notes that the most prevalent species of tilapia in the Sea has a salinity tolerance of 65 ppt.	Based on the best information available, it is believed that 60 ppt will be too saline to support fish. While desert pupfish larvae can survive up to 90 ppt in laboratories, adults and eggs cannot based on observations in the wild. The 65 ppt threshold references survival rates under certain temperature and water quality conditions based on laboratory studies. Conditions in the Salton Sea include additional stressors, such as parasites, which could contribute to their decline. Regardless of the exact threshold, however, salinity, in combination with other factors, will eventually reach the point at which fish will not be able to survive. No text revisions are required.
Pacific Institute	PI-12	<p>ES-1: 35-39 "Piscivorous birds, on the other hand, are at risk of decline. To address this immediate need, the California Legislature appropriated funds for the purpose of implementing "conservation measures necessary to protect the fish and wildlife species dependent on the Salton Sea, including adaptive management measurements (California Fish and Game Code section 2932(b))"</p> <p>The agencies' exclusive reliance on legislation passed in 2003, and their continued refusal to acknowledge SB 187, enacted in 2008, creating California Fish and Game Code section 2932.3, baffles us. For reasons unclear, the agencies ignore California Fish and Game Code section 2932.3 and California Fish and Game Code sections 2940 et seq. This failure to recognize existing state law must be corrected.</p> <p>The agencies' selective interpretation of legislative intent, while refusing to follow the clear legislative direction made explicit in California Fish and Game Code section 2932.3 and California Fish and Game Code sections 2940 et seq., suggests pre-decisional actions and a clear lack of administrative and legislative oversight.</p> <p>In SB 187 (enacted 2008), the Legislature finds "The Salton Sea is considered a globally important bird area because of its astounding diversity of bird species, with more than 400 species, the second highest count in the nation, and the very large populations of some species that rely on it for habitat."</p>	<p>This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).</p> <p>Fish and Game Code section 2932 establishes the Salton Sea Restoration Fund and lists how that fund can be spent. Section 2932.3 describes how a portion of the funds (the Proposition 84 funds) deposited into the Salton Sea Restoration Fund can be spent. It is acknowledged that the Salton Sea Restoration Council has been created by statute; however, the Council has not been assembled, and members have not been assigned or designated.</p>
Pacific Institute	PI-13	The legislature did not direct the agencies to focus exclusively on piscivorous birds; instead, it highlights the importance of the Sea to the full range of bird species that use it. As the Sea continues to decline and if water transfers continue, it will rapidly transition through salinities tolerable to invertebrates to concentrations too high for any macro invertebrates. To meet the clear intent of the Legislature, the agencies may soon need to plan projects that produce the	Please refer to Master Response 3, Project Scope.

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		large numbers of invertebrates needed to sustain the astounding diversity of bird species found at the Sea. Narrowly assuming – as the Agencies do – that fish habitat can supply the full range of invertebrates found at the Sea will preclude higher salinity habitats that generate extremely high invertebrate numbers, as was demonstrated at the Reclamation/USGS pilot ponds. This proposed Project offers the opportunity to do a true proof of concept, with cascading ponds managed to a broad range of salinities, offering guidance for the much larger habitat projects that will be needed in the future. The very narrow focus on piscivorous birds ignores the broader intent of the Legislature and limits the value of the proposed Project to inform future efforts. This project should be expanded to encompass a broader range of salinities and target species, consistent with the explicit legislative findings in SB 187.	
Pacific Institute	PI-14	<p>ES-2: 4-5 “Goal 1: Develop a range of aquatic habitats that will support fish and wildlife species dependent on the Salton Sea.”</p> <p>The goal should be rewritten to be consistent with the explicit project purpose, or the proposed project should be expanded to satisfy the goal. Currently, the proposed project fails to meet this goal.</p> <p>A more appropriate goal, consistent with the alternatives described in the draft, would be: “Goal 1: Develop aquatic habitats that will support fish and piscivorous birds dependent on the Salton Sea.” The project does not develop a range of aquatic habitats and is clearly not intended to support the full range of wildlife species dependent on the Salton Sea (despite the legislative language to that effect): it is explicitly focused on fish and piscivorous birds, as shown by the various objectives that follow this goal.</p>	Please refer to Master Response 3, Project Scope. The goal does not state develop a <i>full</i> range of all possible aquatic habitats, nor was the SCH Project obligated or intended to meet that particular interpretation. The objectives provide further detail that is consistent within the goal. A range of habitat conditions would be present within and among the ponds and over time, depending on operations and topography of the selected alternative. This would include a gradient of depths from shallow areas to deeper toward the sea, swales or channels, and islands for roosting or nesting by birds. Construction of these features would be within the physical constraints of the selected alternative site (e.g., geotechnical stability, topography). No text revisions are required.
Pacific Institute	PI-15	<p>ES-22: 18-21 “The Corps has yet to identify its preferred alternative. The draft section 404(b)(1) alternatives analysis will be completed and included in the Final EIS/EIR. Based on this analysis, the Corps will choose the least environmentally damaging practicable alternative as the Corps’ preferred alternative, which will be subject to public comment.”</p> <p>We look forward to the opportunity to comment on the “practicable” alternative, defined on p. ES-7: 27-28 as “The factors that influence whether an alternative is practicable include cost, logistics, technology, and the ability of the alternative to achieve the overall project purpose.” Unfortunately, the current DEIR does not include any information on cost, and does not offer a credible assessment of the ability of any of the listed alternatives to achieve the overall project purpose.</p>	<p>Please refer to Master Response 5, Project Costs regarding cost issues.</p> <p>Regarding the comment that the Draft EIS/EIR does not offer a credible assessment of the ability of the listed alternatives to achieve the project purpose, note that the SCH Project’s CEQA goals are two-fold: (1) develop a range of aquatic habitats that will support fish and wildlife species dependent on the Salton Sea; and (2) develop and refine information needed to successfully manage the SCH Project habitat through an adaptive management process (refer to page 1-4, lines 11-14). The conceptual alternatives included in the Draft EIS/EIR were based on the best information currently available, and the Project design would continue to be refined as new information is provided in order to provide suitable habitat for fish and wildlife. Other information would be needed, however, and in order to fulfill Goal 2, different operational scenarios would be tested during the proof-of-concept phase, the first 10 years of project operation (to approximately 2025) (refer to page 2-10, lines 28-32). After the proof-of-concept phase, pond variables would be managed to produce the best habitat for</p>

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			fish and wildlife dependent on the Salton Sea. Thus, the Draft EIS/EIR does not claim to have all information needed to successfully manage the SCH ponds at this time. This would be developed during the adaptive management and monitoring program. No text revisions are required.
Pacific Institute	PI-16	ES-8: 23 "Alternative 3 is the Natural Resources Agency's preferred alternative." For reasons described in the following, we find the Agency's preferred alternative to be flawed and unacceptable, primarily because of conflicts with existing and planned constructed habitat efforts. Instead, a modified version of Alternative 4 should be the preferred alternative. Further, the selection of Alternative 3 as the preferred alternative appears to be pre-decisional, both because of the criteria used to justify the decision (e.g., because it is the largest alternative) and especially because the agencies apparently are already in the 75% design phase for this alternative, even before the comment period has closed and well before the agencies have had the opportunity to review public comments.	As discussed on page 2-26, lines 17-21, DWR and DFW are working in close coordination with USFWS staff at the Sonny Bono Salton Sea National Wildlife Refuge to avoid any conflicts between the SCH Project and restoration projects being considered by the Refuge. Refer also to the discussion on page 2-22, lines 32-44. Refer to the response to PI-26 for additional discussion of other restoration projects. Alternative 4 was rejected as the environmentally superior alternative/preferred alternative for a number of reasons, as discussed in Section 7, and the commenter has not provided substantial evidence indicating that it is environmentally superior/environmentally preferred (refer to Section 7.3, Environmentally Preferable/Environmentally Superior Alternative for a discussion of Federal and state requirements.) The selection of Alternative 3 is not pre-decisional, as discussed in the response to PI-5. No text revisions are required.
Pacific Institute	PI-17	ES-13 "Impact EN-1: Pumping would require power for the duration of the Project." This Table should distinguish between baseline power needs of all project alternatives, versus additional energy needed by those alternatives that would also pump river water for delivery to the ponds.	The total power needs of each of the Project alternatives are presented in Table 3.6-2. There is no justification for distinguishing between baseline power needs and power needed for those alternatives that would pump river water. No text revisions are required.
Pacific Institute	PI-18	ES-16 "Impact LU-3: The Project would be designed to minimize conflicts with future planned land uses." The preferred alternative directly conflicts with the stated interest of farmers near the west side of the New River delta to reclaim and farm exposed lakebed, as noted in "Impact SOC-4: Pond creation would preclude the reclamation of exposed playa for agricultural use."	Impact SOC-4 concludes, in part, that there is uncertainty regarding whether any of the exposed land would be reclaimed for agricultural purposes. Please refer to IID-34, in which IID agrees that reclamation of farmland within the area of the proposed alternatives is speculative. Thus, reclamation of land in the vicinity of ponds for agricultural use is not considered a future planned use. No text revisions are required.
Pacific Institute	PI-19	ES-19: 10-13 "In general, those alternatives with greater acreage would have greater benefits to resources such as biological resources, aesthetics, recreation, and socioeconomics, but also would result in greater impacts on air emissions,	Please refer to the response to EPA-8 and Master Response 5, Project Costs.

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		energy demand, transportation impacts, and demand for public services." This statement assumes that the alternatives will be fully funded and constructed to the full acreage described. This neglects funding limitations. An appropriate comparison would describe acreage that could be constructed with unencumbered funds currently existing in the Salton Sea Restoration Fund. Otherwise, any of the six alternatives could be expanded on paper to show greater benefit, even if there are not sufficient funds to construct it as designed.	
Pacific Institute	PI-20	ES-21: 13-31 The suggestion that Alternative 3 is superior because it is the largest is disingenuous, given that insufficient funds exist to build it as described, and given that any of the other alternatives could have as easily been expanded to be the largest such project, at least on paper. Unless the agencies mean to suggest that the proposed project is the only habitat they intend to construct at the Salton Sea, the reasoning in this referenced paragraph suggests that the agencies will only construct habitat near the New River, since the Alamo River sites have higher selenium loadings and are less geologically stable. As proof of concept, the Project should be constructed at the more challenging site, rather than attempting to test methods and practices at the least challenging site available. A modified version of Alternative 4, which offers the best test of future conditions and parameters for habitat construction at the Sea, should be the preferred alternative.	<p>Section 7.3, Environmentally Preferable/Environmentally Superior Alternative explains why sites at the Alamo River were eliminated from consideration as the environmentally preferable/environmentally superior alternative, as well as why sites requiring gravity diversion were eliminated. Of the two remaining alternatives (Alternatives 2 and 3), Alternative 3 offered the potential to create the most habitat. Therefore, the suggestion that selection of Alternative 3 is disingenuous is not supported by substantial evidence.</p> <p>Moreover, the CEQA Guidelines section 15021(a) states that CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible and that:</p> <p>(1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.</p> <p>(2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.</p> <p>Therefore, constructing the SCH Project at a site that would result in greater environmental impacts, such as would occur under Alternative 4, is not consistent with the CEQA Guidelines, nor is it desirable to construct at an even more challenging site with limited funds.</p> <p>Additionally, the Corps can only permit the LEDPA. The Section 404(b)(1) guidelines specify that no discharge of dredged or fill material may be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impacts on the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences. Please refer to the Draft 404(b)(1) alternatives analysis, included in Attachment 3, which evaluates the practicability of each alternative.</p> <p>No text revisions are required.</p>
Pacific Institute	PI-21	ES-21: 39-41 "The Natural Resources Agency has identified Alternative 3 as the preferred alternative because it would provide greater long-term benefits by restoring the greatest amount of habitat, while minimizing environmental impacts to the extent feasible."	Please refer to the response to PI-20.

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		As noted above, this is a misleading basis for determining the preferred alternative, since insufficient funds exist to build the alternative to its designed extent, as acknowledged by the agencies themselves. Would limited funding reduce the size of each of the alternatives by the same percentage? The DEIR does not provide sufficient information to make this determination, since it does not provide general or itemized cost estimates. That is, given the Agency's own stated criterion, it is quite possible that one of the other alternatives would result in more habitat and greater long-term benefits when constructed with available funds. The DEIR should offer specific cost estimates and describe the relative benefits that may be realized with available funds, to offer a more realistic comparison between the alternatives.	
Pacific Institute	PI-22	1-3: 22-23 "The Quantification Settlement Agreement (QSA) is one of the factors contributing to declining inflows to the Salton Sea." This statement appears to be inconsistent with the State's own filings in the referenced QSA litigation, which generally states that the delivery of mitigation water offsets the impacts of the water transfer, so that the QSA is not one of the factors contributing to declining inflows to the Salton Sea.	The referenced statement is correct. Page 1-3, lines 33-35 explains: "IID is required to provide conserved water to the Sea to mitigate the effects of the transfer on salinity until 2017. After 2017, however, the Sea's salinity is expected to exceed the tolerance limit for fish and, thus, mitigation for effects on salinity ceases at that time." The provision of mitigation water is linked to biological impacts. Once IID stops contributing mitigation (after salinity is expected to exceed the tolerance limit for fish water), inflows will decrease rapidly. The resulting changes on Sea elevation and salinity are shown in Figures 3.11-9 and 3.11-10. No text revisions are required.
Pacific Institute	PI-23	1-3 fn. 1 "One of those agreements, the QSA/Joint Powers Authority Creation and Funding Agreement, was invalidated on January 10, 2009 in Sacramento County Superior Court on constitutional grounds" This is wrong. On December 10, 2009, the Superior Court invalidated 12 of the 13 agreements. Note also that the QSA refers to more than just this one agreement, as noted on line 28 on this same page.	Please refer to the response to ICAPCD-1.
Pacific Institute	PI-24	2-4: 25-28. Adequate Water Supply "(this water is lost to evaporation and does not include water that is circulated in the ponds to maintain salt balance or discharged to the Sea to flush ponds)" As noted in the parenthesis above, the "stated adequate water supply" is in fact not an adequate water supply, which must include the volume of water flowing through the ponds. Each alternative should have a clear water budget that includes peak daily water supply requirements, showing evaporation, surface outflow, and projected inflow requirements for each pond. These water requirements must be identified to correctly size diversion and pumping infrastructure, as well as the size of release gates.	The citation in the comment references a discussion that addresses evaporation losses. The full water supply is detailed in Section 3.11, Hydrology and Water Quality. Table 3.11-7 describes the annual diversion rates, and Table 3.11-9 describes the needed water supply in the peak month, including the circulation amount and the evaporation (as a function of the river flow). No text revisions are required.
Pacific Institute	PI-25	2-6: 17-20 "the portion of the alternatives that included Red Hill Bay was eliminated because the United States Fish and Wildlife Service (USFWS) has	This comment is noted. No text revisions are required.

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		plans to develop shallow water habitat in this area as part of the Sonny Bono Salton Sea National Wildlife Refuge (NWR)." Thank you for not siting alternatives at Red Hill Bay, avoiding duplication of USFWS planned habitat in that area.	
Pacific Institute	PI-26	2-6: 20-21 "The USFWS also has a planned restoration project at the New River, and DWR and DFG are working in close coordination with NWR staff to avoid any conflicts between the two projects." This section ignores the joint, on-going IID/USFWS effort that has re-opened a culvert linking the New River to exposed playa to the immediate east of the New River delta. This effort has re-wet exposed playa, providing hundreds of acres of valuable shorebird habitat, with the additional and notable benefit of covering playa that had contributed large amounts of dust to the area. This joint effort, and its benefits, should be clearly described in the draft document. The preferred alternative would eliminate the habitat created by the on-going IID/USFWS effort, reducing the net habitat benefit of the proposed action. The possibility that the scaled-down version of Alternative 3, due to funding limitations, may only replace the existing and planned shallow habitat east of the New River means that agencies might well spend more than million to replace habitat that already exists. This would be a colossal waste of public funds.	As Chris Schoneman, Project Leader at the Sonny Bono Salton Sea National Wildlife Refuge Complex indicated at the April 12, 2011 Stakeholder's meeting in response to this same issue, the referenced habitat was intended to be temporary due to concerns about selenium. This is why the Refuge is proceeding with the new shallow water habitat project at Morton Bay. The Refuge has indicated that they have no objections to constructing SCH ponds as proposed, and the SCH agencies are coordinating closely with Refuge staff to avoid any conflicts. No text revisions are required.
Pacific Institute	PI-27	2-11: 2.4.1.3 Berms It does not appear that geotubes are being considered for the berms, only as barriers on the outboard side of the berms. Why not?	Please refer to the response to comment IID-10. Geotubes are mentioned on page 2-13, including the need to verify the usefulness of geotubes in this application. The final design would consider all appropriate construction techniques using the latest geotechnical data for the soils of the site. No text revisions are required.
Pacific Institute	PI-28	2-17: 2.4.1.13 Saline Water Supply Pump Station Salton Sea water typically is very turbid – will there be some kind of filtration or treatment associated with pumping such water into the ponds? If the pumps draw water from near the sediments, they run the risk of extracting anoxic water, possibly with high concentrations of hydrogen sulfide, posing a risk to life in the SCH ponds. In the near term, the pumps will be fouled by barnacles and other marine life. As the Sea's salinity increases, corrosion will a constant concern, requiring frequent maintenance and replacement. Have these costs been considered?	The saline water can be settled in the sedimentation ponds for the pumped diversion alternatives. Because of the smaller diversion volumes of the saline diversion, if needed, an independent settling pond could be included within the SCH pond footprint. Please refer to the response to ICFB-16 regarding barnacles. Costs are addressed in Master Response 5, Project Costs. No text revisions are required.
Pacific Institute	PI-29	2-22: 2.4.1.25 Project Compatibility with other Potential Future Land Uses The DEIR appropriately describes compatibility with potential geothermal development, but ignores the existing and potential habitat created atop exposed playa east of the New River delta.	Please refer to the response to PI-26.
Pacific	PI-30	This section also fails to acknowledge potential reclamation of agricultural land to the west of the New River, noted elsewhere as "Impact SOC-4: Pond creation	Please refer to the response to PI-18.

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Institute		would preclude the reclamation of exposed playa for agricultural use."	
Pacific Institute	PI-31	2-25: 42 "Several permanent employees would be required to manage the ponds." Since jobs are the catchword of the moment and a key to increasing support for the project, it would be useful to clarify the exact number of permanent employees associated with each alternative.	The precise number has not been determined at this time, but as indicated, only several would be required. Citing an exact number of employees would not change the impact analysis and is not needed. No text revisions are required.
Pacific Institute	PI-32	2-28: 36-27 "The basin would be 60 acres and be excavated below ground surface to approximately 20 feet." Is it possible to excavate 20 feet below the land surface immediately adjacent to the Salton Sea, such as shown in Figure 2-7? Why would a sedimentation basin of this size be necessary? What is the maximum daily river water requirement for the SCH ponds? There appear to be some significant errors in calculation here, leading to a staggering amount of excavation. Simply converting 60 acres at 20 feet deep yields more than 1.9 million cubic yards of material. This is clearly infeasible: strip-mining equipment, which operates at a comparable scale, would quickly sink into the soft soils near the Salton Sea. This scale of excavation is simply not feasible near the Salton Sea. Building such a deep basin near the river would also create a drain for the river itself, as well as surrounding land. Nor is it clear that there is sufficient head between such a deep hole and the nearby ponds, unless the basin were filled, which would raise the water table and interfere with adjacent farming operations. Or is the intent to line the sediment basin? If that is the case, why does it need to be so deep?	The sedimentation basin of the pumped diversion alternatives would not be constructed 20 feet below the ground. The referenced configuration was described for the gravity diversion alternatives and would be required because of the incised river at that location. Please see the response to IID-30 regarding the feasibility of constructing the upstream sedimentation basin. The basin for the pumped diversion would be located in the footprint of the SCH ponds and would have similar conditions as the adjacent SCH ponds. The final basin size would be determined from the size of the diversion determined in the operations plan. Table 3.11-7 discusses the range of potential diversions required to meet the residence time and evaporation water needs. The gravity diversion ponds would be located about 3 miles upstream of the SCH ponds to provide the necessary head for water to flow to the SCH. The basin is not proposed to be lined. The need for the basin to be 20 feet below the ground surface is explained on page 2-19, lines 1-5, and relates to the elevation of the river and need for gravity flow. Note that gravity diversion, with its accompanying upstream sedimentation basin, was not selected as part of the State's preferred alternative (see Section 7). No text revisions are required.
Pacific Institute	PI-33	2-41: 8 River Water Source We suggest that Alternative 4 be modified to locate a river pump station immediately adjacent to the project site, as shown for Alternatives 5 & 6. This would eliminate the need for an upstream sedimentation basin and 3.5 miles of pipeline, and could be managed conjunctively with the river water source for the USFWS project at Red Hill Bay. This would also avoid the Williamson Act challenges associated with the current configuration. This modified version of Alternative 4 would be similar to Alternatives 5 & 6, but with a cascading pond and less habitat along Wister Beach.	This suggestion is noted. As discussed on page 7-3, lines 29-41, sites at the Alamo River were not selected for the preferred alternative due to greater impacts associated with selenium, geologic activity, and geothermal resources. No text revisions are required.
Pacific Institute	PI-34	3.2-4: 35 (and 3.2-9: 22 and other locations) "With over 5,000,000 acres of harvested commodities" should be "With over 500,000 acres ... "	The referenced text has been clarified.
Pacific Institute	PI-35	3.3 Air Quality Do the temporary negative impacts of SCH construction outweigh the long-term beneficial impacts of reducing fugitive dust emissions? How are these countervailing impacts measured and balanced under NEPA/CEQA?	The analysis in Section 3.3, Air Quality did not attempt to compare these two different types of impacts, nor is this required under NEPA and CEQA as part of such a section. Such factors were considered in identifying the environmentally

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			preferable/environmentally superior alternative, however, as discussed on page 7-3, lines 42-47. No text revisions are required.
Pacific Institute	PI-36	<p>3.4-48: 22-27 "The lower thermal and DO tolerances for fish may be exceeded under certain environmental conditions, but not necessarily at the same time, resulting in fish kills that reduce the population size in the ponds where this phenomenon occurs. The lower DO tolerance for some benthic invertebrate species that provide food for fish may also be exceeded at times in some locations, primarily in the deeper portions of some ponds. The duration of such events is expected to be short with rapid recovery of the fish and invertebrate populations."</p> <p>The above paragraph provides insufficient information on the threat posed by poor water quality in the SCH. The survival of fish in the ponds, in sufficient numbers to provide a forage base for piscivorous birds, is the explicit goal of the project. It is fundamental to the success of the proposed project. The DEIR provides insufficient information to assess whether the project will achieve this goal. The DEIR should clearly state: 1) under what environmental conditions would "lower thermal and DO tolerances for fish" be exceeded, and how often this would occur; 2) under what conditions would DO tolerances for benthic invertebrates be exceeded, and how often this would occur; 3) the basis for the assertion that fish and invertebrate populations would recover rapidly.</p> <p>Is this a fatal flaw in the pond design? Will periodic fluxes in DO, as well as seasonal decreases in temperature, exterminate the forage species the ponds are designed to support? If so, the project will fail to achieve its objectives and must be redesigned. The DEIR fails to provide sufficient information to answer these questions. Has water quality in the ponds been modeled as part of the pond design? It is not sufficient simply to state that "The Project is designed to test various pond designs with monitoring to determine what works best to meet the Project goals and objectives" (3.4-48: 31-32) if there is a reasonable suspicion that none of the pond designs will protect water quality sufficiently to maintain invertebrate and fish populations. P. 3.11-43 of the DEIR states that "periods of anoxia both daily (near dawn due to respiration of all organisms present) and seasonally (especially in spring and fall)" will impair the ponds, suggesting that model has in fact been constructed and run, and that more information exists than is presented on p. 3.4-48.</p> <p>Although Appendix J describes a Fish Tolerance study, this study was very poorly designed and not very relevant to the proposed project. According to the description, the "cold" temperature tested by the Fish Tolerance study was 52-61 °F (J-9: 13). However, Appendix D notes that water temperatures at the SCH are expected to fall below 50 °F (D-5: 18-20). A relevant Fish Tolerance study would examine fish tolerance at a range of temperatures below 50 °F. Despite this</p>	<p>Please refer to the response to PI-2 regarding the purpose and focus of the SCH Project and the response to ICFB-2. Also refer to Master Response 7, Operations and Adaptive Management.</p> <p>The SCH is an experimental, proof-of-concept project. The EIS/EIR focuses on the Project alternatives' potential impacts on the environment, not the performance of the experimental ponds, which would be monitored and adjusted following an adaptive management approach.</p> <p>The SCH experimental ponds have been designed to provide aquatic habitat within the constraints of the physical site (i.e., elevation and topography) and the challenging environmental conditions currently existing at the Salton Sea, such as climate and eutrophic conditions. Temperatures are outside the Project's ability to control, but operations would be adjusted where possible to ameliorate some of the effects (e.g., use lower salinity to reduce cold stress [Section D3.2, pg D-6, lines 12-15]). Invertebrates should recover, as evidenced by colonization of the Reclamation/USGS ponds without any inoculation.</p> <p>As much modeling was performed as is reasonable in order to support the hypotheses used to develop the SCH concepts. Water quality modeling conducted by the University of California at Riverside (UCR) highlighted some issues to monitor as the ponds would be operated (e.g., temperature, salinity, and dissolved oxygen). However, this simple, one-dimensional model was not meant to be a perfect depiction of reality. While it highlighted some issues to inform design of pond and operations, it could not capture spatial heterogeneity and would not be appropriate to use as a definitive predictor of pond conditions. Further details clarifying tilapia tolerance and temperature have been incorporated in Appendix D (Operations) and Appendix J (Special Studies [e.g., fish tolerance study and hydrologic modeling]). Conditions at the experimental ponds would be monitored to determine whether dissolved oxygen and temperature pose problems for fish.</p> <p>The availability of river flow for the SCH ponds was evaluated in Section 3.11.3. The flow in month(s) of minimum flows was described for New River (December median 521 cfs, 90th percentile 423 cfs, pg. 3.11-7, lines 36-38) and Alamo River (January median 630 cfs, 90th percentile 443 cfs, pg 3.11-11, lines 16-20). This flow is sufficient to support the diversion rates for the SCH ponds in the winter, a period of minimum evaporation losses, even at lower salinity levels (mean diversion rates for different operations and alternatives, Table 3.11-8). Section 3.11.3 also evaluated the availability of New River and Alamo River flows to meet periods of peak diversions: in summer (highest evaporation) for operations of</p>

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		<p>study, we still do not know the expected mortality of fish in the ponds.</p> <p>The Fish Tolerance study suggests lowering the salinity of the ponds during the coldest months, to reduce stress for the fish and improve their survival rates. However, these coldest months are also the period when New and Alamo river flows are at their lowest levels. The DEIR does not appear to evaluate the availability of river flow during these months.</p>	<p>short duration residence time (2 weeks) <i>and</i> lower salinity (20 ppt) (Table 3.11-9). No text revisions are required.</p>
Pacific Institute	PI-37	<p>3.6-1: 6-9 "The equipment and vehicles used during construction and maintenance would be the minimum needed to perform the required work, and fuel would not be used in a wasteful manner. Therefore, fuel consumption and electrical demand during construction is not addressed in this section."</p> <p>While it's comforting to know that fuel would not be used in a wasteful manner, this is not sufficient information for the reader to determine the total energy consumption associated with construction of the proposed project. Given the very large amount of excavation and dredging associated with the described alternatives (including more than 1.9 million cubic yards of excavation just for the sediment basins), presumably a very large amount of fuel will be required, even if it is used efficiently. This section should be re-written to describe and assess the actual amounts of energy consumed for construction. In fact, Table G-1 notes that the preferred alternative would require an estimated 644,000 gallons of diesel fuel, just for on-road activities (off-road activities, such as excavation and dredging, would require additional fuel). It would be useful to include relevant information from the appendices in the analyses sections.</p>	<p>The significance threshold in this section (page 3.6-4, lines 27-28 addresses whether "impacts on energy consumption would be significant if the Project alternatives would result in the inefficient, wasteful, or unnecessary consumption of energy." The mere volume of fuel consumption is not an indicator of whether it would be used in a manner that was inefficient, wasteful, or unnecessary. The SCH Project includes best management practices (Section 2.4.7) that are intended to reduce air emissions, thereby also ensuring that fuel is not used in an inefficient, wasteful, or unnecessary manner. No text revisions are required.</p>
Pacific Institute	PI-38	<p>3.6-6: 13-15 "The seawater pump would lose efficiency over time because of the hypersaline water being pumped, but would be maintained as appropriate to reduce fouling and would be replaced when needed."</p> <p>Please provide estimates on how frequently the seawater pumps would need to be replaced, and the associated costs of maintenance and replacement.</p>	<p>This information does not have a bearing on the environmental impacts of the Project alternatives. The replacement rate of the saline pumps is unknown and will be addressed in the maintenance plan developed for the Project.</p>
Pacific Institute	PI-39	<p>Table 3.9-3 and Table 3.9-5 These two tables indicate that the construction of the preferred alternative would generate roughly twice the amount of greenhouse gas emissions of alternatives 4 or 5 (6,650 metric tons of CO₂e versus 3,400 and 3,057 metric tons of CO₂e, respectively), and that operation of the pumps for the preferred alternative would generate at least double the greenhouse gas emissions of alternatives 4 or 5, every year. That is, over a 60-year lifespan, the preferred alternative would generate at least 99,000 metric tons of CO₂e more than either alternative 4 or 5.</p>	<p>This comment is noted; GHG emissions were only one of the factors considered in the selection of the preferred alternative. Each alternative performs better for some metrics and not as strongly for others, and the selection of the preferred alternative was made by evaluating the full range of benefits and impacts of the alternatives. The conclusions in the Draft EIS/EIR are unchanged.</p>
Pacific Institute	PI-40	<p>3.11-15: 8-10 and Table 3.11-5 This table and text includes a conversion error. At brackish and higher salinities, g/L TDS are not interchangeable with ppt TDS. The reported salinity of the Sea, at 51.8 g/L, converts to roughly 49.3 ppt, not 52</p>	<p>Please refer to the response to PI-10.</p>

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		ppt. Note also that 35 g/L is not the same as 35 ppt.	
Pacific Institute	PI-41	3.11-25: 23-25 "For the peak evaporation month (June), the reduction downstream of the diversion would range from 7 percent to 56 percent for the New River and 4 percent to 28 percent of the Alamo River flow." Diverting more than 50% of the flow of the New River would be a significant impact, with measurable adverse effects on the riparian corridor and delta.	A 50 percent reduction in river flow is a worst-case scenario and not the average scenario. A reduction in river flow would affect primarily non-native aquatic species by reducing the volume and structure (e.g., water depth) of habitat available downstream of the diversion location. The river delta and associated estuary will move seaward with and without the Project as the Sea recedes, but the reduced river inflow would reduce the size of the estuary (mixing zone). Habitat for nesting bird colonies (large trees) will remain where it is due to high groundwater levels maintained by the adjacent SCH ponds. The amount of riparian vegetation that colonizes the margin of the river on the exposed seabed would depend on a number of factors with amount of water being only one of them. The discussion in Impact BIO-5b on page 3.4-48 for Alternative 1 has been expanded to address effects of water diversion on aquatic and adjacent riparian species and concludes that these impacts are less than significant. This analysis also applies to the other alternatives. No text revisions are required.
Pacific Institute	PI-42	3.11-30: 28-30 "The reduction in river flow due to the SCH Project would not adversely affect downstream water users, and this issue is not addressed further in this section. Impacts on biological resources from the reduction in flow are addressed in Section 3.4, Biological Resources." Presumably, a >50% reduction in river flow would adversely affect downstream biological resources, both within the riparian corridor itself and in the estuary. Note that these impacts are not, in fact, addressed in Section 3.4, which instead focuses on impacts from construction and maintenance, but ignores the potentially significant adverse effects associated with a >50% reduction in river flow.	For the pumped diversion alternatives, water diversion would not affect any downstream users because none are present downstream of the diversion location. For the gravity feed alternatives, less than 50 percent of the river flow would be diverted, leaving adequate water for downstream users. Also, please refer to the discussion under IID-21. No text revisions are required.
Pacific Institute	PI-43	Appendix D. The spacing of the text suggests an error occurred when converting the document to a pdf, making it difficult to read. Please proofread the document before public release.	We apologize for any inconvenience. Corrected files are included in Attachment 5 of the Final EIS/EIR.
Pacific Institute	PI-44	Table G-7. Note that the values listed under the CO2 column did not convert properly in the pdf – many of these are not legible.	We apologize for any inconvenience. Corrected files are included in Attachment 3 of the Final EIS/EIR.
San Diego Audubon Society	SDAS-1	We believe that the U.S. Army Corps of Engineers (ACOE) and California Natural Resources Agency (NRA) have done a fine job of preparing a conservation plan that goes to great lengths to provide for the preservation of habitat for piscivorous sea birds, so that they will continue to forage and reproduce in the area, long after the Salton Sea is no longer able to support fish, due primarily to projected increases in salinity. The impacts of the proposed project to piscivorous fish are well supported in the DEIS/DEIR; however, we believe that it falls far short in addressing impacts to shorebirds, including the Western Snow Plover	The San Diego Audubon Society's support of the SCH Project is noted. Impacts of the SCH Project on shorebirds, however, are analyzed appropriately. Impacts of the SCH Project on the interior population of the western snowy plover were addressed (for example, refer to Table 3.4.4 and the discussion on pages 3.4-37 and 3.4-38). The increase in salinity and receding shoreline referenced in this comment will occur regardless of whether the SCH Project is implemented and are not a result of the Project. Effects of these habitat changes on shorebirds, therefore, are not analyzed as impacts of the SCH Project alternatives, although

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		<i>(Charadrius alexandrinus nivosus)</i> , which was listed by the U.S. Fish and Wildlife Service as threatened in 1993 (USFWS 2011). The Western Snowy Plover and other shorebird species are directly dependent on shoreline habitats of the Salton Sea that are used as breeding habitat and also support macroinvertebrates, which presumably could also be affected by the anticipated increase in salinity and receding shoreline that would occur in any of the proposed alternatives in the DEIS/DEIR. This important wildlife resource of the Salton Sea is given very superficial treatment in the DEIS/DEIR, seemingly because the six action alternatives in the SCH are all very similar in form and function and are primarily oriented toward conserving piscivorous seabird habitat. The result is that the DEIS/DEIR demonstrates positive direct, indirect, and cumulative impacts for piscivorous seabirds, while any such impacts to shorebirds are minor and were arrived at incidentally. Potentially adverse indirect impacts to shorebirds in the form of eventual lost foraging and nesting habitat and food resources appear to have been overlooked as well.	they are described under the No Action Alternative (Section 3.4.4.3). As discussed in Section 1.3 and in Master Response 3, Project Scope, the goal of the SCH Project is to provide fish for piscivorous birds and not invertebrates for shorebirds since the former resource will be gone long before the invertebrates used by shorebirds will change substantially. The SCH Project would not result in the potential for adverse indirect impacts on shorebirds from lost foraging and nesting habitat and food resources. Rather, although they are not specifically designed for shorebird foraging, the SCH ponds would produce invertebrates that could be used by these birds. No text revisions are required.
San Diego Audubon Society	SDAS-2	The Salton Sea is widely recognized as an important shorebird breeding and overwintering site. According to Avifauna of Salton Sea: Abundance, Distribution, and Annual Phenology (Shuford, et al. 2000): <i>Shorebird totals at the Salton Sea in some years have exceeded 100,000 individuals in both spring and fall (PRBO and R. McKernan unpubl. data). Regional comparisons indicate the Salton Sea is one of only eight sites in the interior of western North America that holds over 10,000 shorebirds in fall and one of five such sites in spring (PRBO unpubl. data). In terms of overall shorebird numbers, the Salton Sea is the most important area in the Intermountain and Desert region of the West in spring and the second most important, after Great Salt Lake, in fall. Shorebird populations at the Salton Sea from 1989 to 1995 averaged 24,000 in December, 90,000 in April, and about 85,000 individuals in August. Shorebird surveys in 1999 provided additional documentation for these patterns and added a total of about 70,000 shorebirds in November, a month for which prior thorough surveys were lacking. Surveys in 1999 confirmed that the Salton Sea supports the largest population of wintering Snowy Plovers in the interior of western North America (Shuford et al. 1995) and is one of a handful of key breeding areas in the interior of California (Page et al. 1991). Surveys in 1999 indicate the Imperial Valley is even more important than previously recognized for the Mountain Plover, as it held about 30% to 38% of the species' entire population of 8000 to 10,000 birds (Anonymous 1999).</i>	Page 3.4-16 describes the importance of the Salton Sea Basin for waterbirds, including shorebirds. The general description is then focused on species most likely to be affected by the SCH Project. The additional information regarding shorebird abundances provided in this comment is not necessary to support the impact analysis in the document. The mountain plover and interior western snowy plover are addressed in Section 3.4.3.4, Special-Status Species (see Table 3.4-4 and page 3.4-27). The SCH Project would not affect mountain plovers, and this species is not discussed in detail. No text revisions are required.
San Diego Audubon Society	SDAS-3	The six action alternatives call for the construction of impoundments that would be supplied with brackish water from either the Alamo or New River with hypersaline water added from the Salton Sea in order to maintain an optimal range of salinity. The impoundments would be stocked with fish in order to	Please refer to Master Response 3, Project Scope. Impact BIO-1 addresses the SCH Project's impacts on western snowy plovers (significant for construction) and mountain plovers (less than significant). Impact BIO-5a and 5b addresses impacts on common birds, including shorebirds. No

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		<p>provide forage for piscivorous birds. Islands would be constructed as colonial nesting areas for terns, and smaller islands would be constructed to serve as roosting areas for other piscivorous species such as cormorants and pelicans. These impoundments would feature deep and shallow water habitats to serve the foraging activities of a range of piscivorous bird species. No features of the impoundments were considered to provide nesting or foraging habitats for shorebirds, including the Western Snowy Plover. Although some shorebirds would undoubtedly use these habitats for roosting areas and possibly some limited foraging, the presence of large predatory birds including gulls and ravens and the lack of critical nesting attributes will not provide suitable nesting habitat for shorebirds and in particular the Western Snowy Plover, who's nesting habitat requirements are well documented. The DEIS/DEIR states in section 3.4 in Table 3.4.4 that the western snowy plover:</p> <p><i>Nests primarily in flat open areas, with sandy or saline substrates; less commonly in salt pans, dredged spoil disposal sites, dry salt ponds, and levees. Occurs year-round at the Salton Sea (Shuford and Gardali 2008). The Programmatic Environmental Impact Report (DWR and DFG 2007) noted this species uses the Salton Sea for breeding and wintering. Surveys estimated 221 breeding adults at the Sea in 1999 (Shuford and Gardali 2008).</i></p> <p>Likewise, foraging habitats and food resources for Western Snowy Plovers and other shorebirds in the form of macroinvertebrates were not adequately addressed. According to the <i>Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (Charadrius alexandrinus nivosus) Volume 1 Recovery Plan</i> (USFWS 2007) pp17:</p> <p><i>Western Snowy Plovers forage on invertebrates in the wet sand and amongst surf-cast kelp within the intertidal zone, in dry sand areas above the high tide, on salt pans, on spoil sites, and along the edges of salt marshes, salt ponds, and lagoons. They sometimes probe for prey in the sand and pick insects from low-growing plants... Opportunities for foraging are directly dependent on salinity levels. Specifically, salt ponds of medium salinity seem to provide the best quality foraging habitat.</i></p>	<p>text revisions are required.</p>
San Diego Audubon Society	SDAS-4	<p>Regarding construction of the proposed impoundments, the DEIS/DEIR states in Section 3.4 pp37 <i>"Pond construction (primarily the berm on the landward side of the ponds) would cause a small loss of foraging habitat for the western snowy plover, but other foraging habitat would remain outside the Project footprint."</i> While this is true for the period during and immediately following project implementation, it does not consider the eventual fate of the Salton Sea, which is expected to retreat seaward, all the while increasing in salinity. The DEIS/DEIR uses the retreating shoreline as a rationale for calling project impacts to potential foraging habitats of the Western Snowy Plover temporary, but does not address</p>	<p>Impacts on western snowy plover resulting from increased salinity levels are not impacts of the SCH Project; rather, they are impacts that would occur regardless of whether the SCH Project was implemented. Such impacts are addressed under Section 3.4.4.3, No Action Alternative. No text revisions are required.</p>

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		any impacts to the Western Snowy Plover once the salinity levels increase to the point that they no longer support the present assemblages of invertebrates and the inevitable loss of the lake and therefore, most of, or all shoreline habitat.	
San Diego Audubon Society	SDAS-5	The DEIS/DEIR clearly states the projected acreages of agricultural lands covered under Williamson Act contracts that would be affected, but does not to any meaningful extent provide any estimated impacts of agricultural land conversions to any wildlife, including birds. Agricultural lands are relied upon for foraging and/or nesting by many birds species. Bird use of agricultural lands is of course dependent on the ecology of bird species as well as the crops that are grown and other management practices. Many shorebirds benefit from agricultural lands that are periodically flooded and provide macroinvertebrates. Waterfowl, especially geese benefit from tall grasses that provide nest concealment and from waste grain after harvesting. Western Meadowlarks (<i>Sturnella neglecta</i>) often nest in grass fields and Savannah Sparrows (<i>Passerculus sandwichensis</i>) commonly use these habitats during winter, particularly where there are windrows or other forms of cover.	Minimal impacts on wildlife would result from the limited conversion of agriculture land that would occur as a result of Alternatives 1 and 4 (60 acres out of approximately 500,000 acres in the Imperial Valley); no permanent conversion would occur under the other project alternatives. Additionally, please note that protection for nesting birds is provided by Mitigation Measure BIO-2 (page 3.4-40), which addresses the need for a preconstruction/maintenance survey plan for bird species that could be impacted by the project. Pre-construction nesting surveys also would be conducted for birds in all habitats, including any agricultural land that would be affected by the SCH Project. No text revisions are required.
San Diego Audubon Society	SDAS-6	The final EIS/EIR (FEIS/FEIR) should include an analysis of potential changes to nesting habitats for shorebirds at the Salton Sea. The analysis should include species that are known to nest at the Salton Sea in large numbers such as the Black-bellied Plover (<i>Pluvialis squatarola</i>), Black-necked Stilt (<i>Himantopus mexicanus</i>), and American Avocet (<i>Recurvirostra americana</i>) as well as special status species, which would include the Western Snowy Plover.	Please refer to the response to SDAS-4 regarding future changes at the Salton Sea. The SCH Project would provide increased nesting habitat through the creation of nesting islands within the ponds. Nesting also would be available on the landward side of the berms. The nesting of western snowy plover is addressed on page 3.4-37 and 38. Black-bellied plovers are not known to nest at the Salton Sea (Patten et al. 2003). No text revisions are required.
San Diego Audubon Society	SDAS-7	An analysis of potential changes to wintering habitats and macroinvertebrate prey should also be included in the FEIS/FEIR. It is possible that populations of wintering shorebirds could be maintained in the future by increased reliance on adjacent farmlands (which the DEIS/DEIR states will likely increase under any proposed action alternative) and duck clubs for foraging; however, that is not discussed and should be included in the FEIS/FEIR. Impacts to other bird species that would result from the No Action Alternative as well as the alternatives that would affect the acreages and composition of farmlands should be analyzed and discussed in greater detail as well.	The potential for increased use of adjacent farmland would occur as part of the No Action Alternative (refer to page 3.4-32, lines 24-26) and not as a response to the SCH Project. As discussed under SDAS-5, the SCH Project would have minimal impacts on the use of agricultural land, and associated macroinvertebrates, as wildlife habitat. No text revisions are required.
San Diego Audubon Society	SDAS-8	New alternatives should be developed if none of the existing alternatives are determined to provide either "no impact" or beneficial impacts to the nesting and foraging activities of resident and overwintering shorebirds.	Please refer to the response to SDAS-1.
San Diego Audubon Society	SDAS-9	As a suggestion, if the SCH needs to be amended, the creation of a mix of shorebird habitats, including mudflats, permanent sandy shore, shallow water, and salt pans supporting healthy populations of invertebrate prey species would be highly beneficial for the wide range of shorebird species that depend on the	Please refer to the response to SDAS-1.

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		Salton Sea for nesting and foraging. Care should be taken to ensure that any created shorebird nesting habitats are not near perches or roosting areas for predatory birds such as gulls, crows, ravens, and raptors and that if at all possible, they are either protected from, or offer concealment from terrestrial predators such as coyotes, foxes, skunks, and raccoons.	
San Diego Audubon Society	SDAS-10	We would like to reemphasize San Diego Audubon's deep appreciation for your efforts to conserve the habitats of the Salton Sea and our willingness to provide assistance in that effort.	The San Diego Audubon Society's support for the SCH Project is noted.
Energy Source	ES-1	Having been involved with many projects at the Salton Sea over the last 35+ years there is one truism I find to be absolute and that is; anytime a map(s) is made such as in the case of shallow habitat at the Alamo River-Morton Bay, it will be adopted by those opposed to any energy development (solar or geothermal) in the area. The writers of this DEIS/R document will point to the various sections that this site is the premier, undeveloped geothermal resource in California and geothermal development can be compatible with SCH. Not one map or exhibit shows the 4000 to 5000 acres of potential geothermal resource development. The Resources Agency recognized the geothermal potential by reserving out this area from the development of habitat.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Energy Source	ES-2	We suggest that all early start habitat projects be conducted in the area of the New River, giving the area of the Alamo River a chance for geothermal development without the conflict of moving the proposed habitat. This would help to meet the State's goal of 30% renewable energy.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Defenders of Wildlife	DOW-1	In addition to these comments, Defenders joins in the more detailed and comprehensive comments submitted by the Pacific Institute on October 14, 2011.	This comment is noted.
Defenders of Wildlife	DOW-2	Defenders has been engaged in Salton Sea efforts for more than 8 years and served as a member of the California Resources Agency's Salton Sea Advisory Committee and has provided extensive comments and recommendation on the California Natural Resources Agency's Salton Sea Ecosystem Restoration Program Programmatic EIR. As part of that document, we endorsed Period 1 activities, including the development and construction of shallow pond habitat complexes known in the document as "early start habitat." The current proposed Salton Sea SCHP is the most recent version of this "early start habitat" and is long overdue given current conditions at the Salton Sea.	This comment is noted.
Defenders of Wildlife	DOW-3	As mentioned above, Defenders strongly supports the construction of shallow pond habitat around the Salton Sea. Unfortunately, the DEIR provides insufficient information for us to determine whether the proposed project will work as intended. First, there is no information or certainty that the state has the legal	Please refer to Master Response 6, Water Rights.

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		right to divert any amount of water from the New or Alamo Rivers for this project.	
Defenders of Wildlife	DOW-4	Second, the DEIR provides little information to show that the proposed project will produce fish in sufficient numbers to provide an adequate forage base for piscivorous birds – the project's stated purpose. For example, there is nothing in the description of the alternatives, the subsequent environmental analyses, or any of the appendices that provides information on projected fish production rates or harvest rates. Section 3.4 states that fish and invertebrates may suffer from seasonal or even daily mortality, due to low concentrations of dissolved oxygen (DO) and low temperatures, but does not offer any estimates of the magnitude of these mortality events or describe how this periodic mortality will affect the overall ability of the project to meet its goals.	Please refer to the response to PI-36 and ICFB-2.
Defenders of Wildlife	DOW-5	Third, the DEIR neglects to provide any information on costs. How much would it cost to construct each alternative? What are the projected annual operations & maintenance costs of each alternative?	Please refer to Master Response 5, Project Costs.
Defenders of Wildlife	DOW-6	How much money is currently available? What additional funds might be obtained? Can the alternatives be scaled back, if full funding is not available? How will this affect the adverse and beneficial impacts analyses? Given the fact that the state agencies have used up more than half of the bond funds for Salton Sea Restoration and the state has no funding plan in place for how to deal with its current mitigation obligations at the Sea, the issue of how any project is going to be funded is critical. Any final project should be designed to be built and operated on existing funds with the ability to be expanded if new funding is secured. Currently, that does not appear to be one of the criteria for this project.	Please refer to Master Response 4, Project Funding and the response to PI-4.
Defenders of Wildlife	DOW-7	As noted above, given that no water has been secured to operate this habitat project, determining the correct amount of water necessary to run this project is critical. According to the DEIR, the preferred alternative could divert more than 50% of the total historic flow of the New River during June, the peak evaporation month. Aside from the fact that future New River flows will be significantly lower in the future, due to water transfers and water conservation efforts in the Imperial Valley and further reductions in flows from Mexico, diverting more than half of the river's flow raises many questions. In addition to the immediate environmental impacts (to the river and riparian corridor downstream and to the estuary formed at the river's mouth), this diversion suggests that a maximum of 7,000 acres of shallow habitat could be constructed near the New River, and perhaps 10,000 acres near the Alamo River, given the volume of water available during June. If this is accurate, what does it say about long-term mitigation strategies for the Salton Sea? Would it be permissible to divert the entire flow of the New River to deliver water to constructed habitat? Or does the preferred alternative represent, in effect, the maximum amount of constructed habitat feasible near the New	<p>Please refer to Master Response 6, Water Rights regarding water supplies. As discussed in Section 3.11.3.3, No Action Alternative, the flow in the New and Alamo rivers is declining over time. With this decrease will come the various changes in riverine and Sea habitat, including the eventual collapse of the Sea ecosystem. The SCH Project uses water from the rivers to replicate the habitat qualities that will no longer be present on the playa, thereby offsetting the lost habitat found with a declining Sea. As the river water supply declines, the SCH ponds would adapt the diversion requirements to accommodate the available water supply.</p> <p>The SCH is not sized to be the maximum feasible habitat but rather the habitat that can be accomplished at an elevation of -234. Additional habitat could be explored in the future with consideration of lessons learned with this project and considerations of available water. No text revisions are required.</p>

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		River?	
Defenders of Wildlife	DOW-8	Furthermore, the selection of Alternative 3 as the preferred alternative appears to be pre-decisional, both because of the criteria used to justify the decision (e.g., because it is the largest alternative) and especially because the agencies apparently are already in the 75% design phase for this alternative as opposed to the other alternatives, even before the comment period has closed and well before the agencies have had the opportunity to review public comments.	Please see the response to PI-5.
Defenders of Wildlife	DOW-9	For the reasons described above and more fully in the comment letter submitted by the Pacific Institute, the preferred alternative is flawed. Instead, a modified version of Alternative 4 should be considered as the preferred alternative as it offers the best opportunity to test future conditions and parameters for habitat construction at the Salton Sea.	Please see the response to PI-20.
Center for Biological Diversity	CBD-1	The Center joins with and incorporates by reference herein the comments provided by Defenders of Wildlife and the Pacific Institute regarding the proposed project.	This comment is noted.
Center for Biological Diversity	CBD-2	The Center supports the overall goals of the proposal to begin the process of habitat restoration in the Salton Sea and specifically to provide early start shallow pond habitat in key areas. However, we are concerned that the DEIS/EIR fails to fully explore the impacts of the proposed project on existing habitat and species and fails to examine how the overall goals of the proposal can best be accomplished through a robust alternatives analysis.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). Please refer to the responses to CBD-3 through CBD-8 for responses to more detailed comments.
Center for Biological Diversity	CBD-3a	For example, the environmental review documents fail to explain how critical water resources will be obtained	Please see Master Response 6, Water Rights.
Center for Biological Diversity	CBD-3b	and the status of funding for the proposed project to ensure it will be completed and have the best chance to provide the needed conservation. Because the proposal is envisioned as part of a series of likely future restoration projects in the Salton Sea, it is critical to ensure that the design reflects that fact and that sufficient monitoring and data collection regarding the effect of the project is also funded so that information can be used to inform future proposals.	Please see Master Response 4, Project Funding.
Center for Biological Diversity	CBD-4	While the focus of the proposed project on restoring habitat for some species may be reasonable, that does not however excuse the DEIS/EIR from failing to fully explain the potential impacts of the proposed project on other species and habitats particularly from the proposed changes in water diversions.	Effects of proposed water diversions (not a change in diversions) were addressed in Impact BIO-5b, and that discussion has been expanded to discuss potential effects in more detail.
Center for Biological	CBD-5	The environmental documents also fail to clearly define the goals for the proposed project in the context of an unstable baseline and historic condition as	Please refer to PI-2.

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Diversity		well as the likely future conditions at the Salton Sea.	
Center for Biological Diversity	CBD-6	Given the complexity of the problem, the Center supports the development of innovative proposals to meet the short-term and long-term goals for conservation and restoration of habitat in the Salton Sea and the Center also recognizes that implementation of well designed conservation and restoration projects for the Salton Sea habitats are essential for the many species that depend on the sea for their survival.	This comment is noted.
Individuals			
Paul Wertlake, MD	Wertlake-1	This is a simple statement by an interested and concerned person living in the Coachella Valley. An agreed plan, ONE, must be adopted. I believe it must be make a mandatory benchmark although exceedingly difficult to reach due to the diverse factors and views. The many differing views that have been proposed publicly lead to a division of effort, focus, interest and intent. Absent a single cohesive message and plan I fear failure.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Steve Boland	Boland-1	Maybe you could make a canal from the Colorado river into and out of the Salton Sea to bring in fresh water and control the level of the water for wildlife habitat. It would be a more long term solution.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
M. Ryan	Ryan-1	How disheartening to read the report sent to us re: the Salton Sea <u>vs</u> the army Corps of Engineers; i.e. page 3 –“the Corps will evaluate impacts on the environment”- fox in the hen house here! This group <u>creates</u> environmental disasters; 2 immediately come to mind - Idaho <u>Teton</u> dam, Miss. levees in N.O.LA. Spare us this group!	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).
Ruth Niswander	Niswander-1	After studying them, I really can find no reason not to accept the alternative 3, which is the preferred alternative of The Natural Resources Agency. It seems to be <u>the best one</u> ! Thank you for sending me the alternatives.	This comment is noted.
James Eric Freedner	Freedner-1	To the extent that any waters would be added to or diverted into the Salton Sea from natural rivers or artificially-created ponds onto or over my property, I oppose the proposal and its draft environmental impact report. It appears from the plan that a greater volume of water may permanently be diverted onto my property. The EIR has not addressed the subject of impacted private land ownership in the Alamo River project. The change to my property would not be merely an "economic" one ("changing land values"), but would be a "taking" of my land without reasonable compensation therefore, in violation of the State and Federal Constitutions.	Section 2.4.1.3, Land Acquisition addresses the process by which land would be acquired. It is unclear where your land is located, but this section indicates that the land where the SCH ponds would be located is owned by IID and would be leased from IID for the Project's duration, with the exception of the land at the Wister Beach SCH pond, which is owned by a number of private parties. In the case of private land, easements would be obtained from willing landowners only. If an easement cannot be negotiated with a landowner, the proposed facilities would be located at another site. Since land would be obtained only from a willing owner, no taking of land would occur. No text revisions are required.
James Eric Freedner	Freedner-2	As a separate concern with this project, creating fresh-water lakes and stocking them with fish would not resolve the problem of migratory birds coming into	Migratory birds are already in contact with the Salton Sea; the SCH Project is not intended to resolve any problems associated with migratory birds coming into

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		contact with saline and polluted waters of the Salton Sea itself, as they would not necessarily remain in the fresh-water ponds but would roam over the Sea. The fresh-water ponds would quickly be fouled with feathers and excrement and become themselves polluted. A similar attempt to provide refuge for birds was put into place near Malibu Surfrider Beach here in Los Angeles County. As a result, the bacteria content of the public beach increased to the point where Surfrider Beach received an "F" grade on numerous occasions as to water safety. Here, while there is apparently no swimming taking place in the Salton Sea, the added bacterial content and conveyance of foul waters would diminish from the quality and value of the Sea.	contact with the Salton Sea. While birds would defecate in and near the SCH ponds, the ponds would replace a portion of the habitat for these birds that is currently present at the Sea, but that will disappear over time. The Project is not expected to attract more birds to the Salton Sea than are currently present (refer to the discussion in Section 3.10, Impact HAZ-3 and Section 3.19, Impact SOC-7). Thus, the SCH Project would not result in increased pollution of the Salton Sea due to the presence of birds. No text revisions are required.
James Eric Freedner	Freedner-3	It would better serve the area to let the Sea dry up in the due course of nature.	This opinion is noted; it is not a comment on the SCH Project.
Chris Cockcroft	Cockcroft-1	The Dept held one meeting several years ago on the plan to restore the Salton Sea. It flopped and no money was appropriated by the Legislature. Last year (June 2010) after the QSA was voided by Judge Roland Candee two very junior reps came to Palm Desert and gave an extremely vague presentation with no stenographer, (no comments were recorded) and no period for comment by the audience. This time, we--the residents of the valley in which the Sea exits--were handed this project as a "proof of concept" for restoration of the Sea. The California Legislature intended to restore the Sea, fix it, as it were. It envisioned an 8 billion dollar project. The idea went nowhere because it was deeply flawed. Now you are calling this a proof of concept, as though it will lead to many other similar projects. This project does nothing for brown pelican, Yuma clapper rail, desert pupfish, peregrine falcon, and bald eagle--all endangered and protected species that must be protected. Change the name of your project. Don't call it a proof of concept because it isn't. It establishes a few ponds to mitigate the problem.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration and Master Response 3, Project Scope. The SCH Project is a proof-of-concept project, as described in Section 2.4, Features Common to the Project Alternatives Carried Forward for Detailed Analysis. No text revisions are required.
Jack M. Feliz	Feliz-1	You are a person of vision and I hope that you will approve of my attached plan for saving the Salton Sea. Perhaps you may present this plan to the appropriate authorities and encourage its accomplishment.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Jeff Geraci	Geraci-1	<i>B. Amphitrite Saltonensis</i> was first described a sub-species in 1949 by F.L. Rogers and later retained as valid by Henry & McLaughlin in 1975. In 1992, P.T. Raimondi reaffirmed this statement after detecting differences in larval morphology and development. This unique sub-species of <i>B. Amphitrite Saltonensis</i> exists nowhere else in the world but at the Salton Sea, which leaves me baffled as to why there is no mention of preserving, protecting, or otherwise assessing the potential impacts on this isolated and unique sub-species of	The rationale for SCH Project goals is discussed in Section 1.3. Also refer to Master Response 3, Project Scope. Barnacles are not a targeted species of the SCH Project. Changes in the salinity of the Salton Sea that will adversely affect barnacle populations will occur regardless of whether the SCH Project is implemented. The SCH Project would not adversely affect barnacle populations in the Salton Sea; thus, such impacts have not been discussed. The SCH Project, although not specifically targeted for barnacles, could benefit the subspecies through a more stable water quality and at least limited attachment

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		barnacle.	habitat within the ponds. No text revisions are required.
Jeff Geraci	Geraci-2	Barnacles are filter feeders, and in high densities they can have a positive impact on water quality and water clarity, as well as the Salton Sea's food web. Barnacle colonies provide critical habitat for a variety of other benthic organisms that comprise the base of the Salton Sea's food web. As I stated, in reviewing the EIR for this project, I found that there is no mention of <i>B. Amphitrite Saltonensis</i> in the CEQA section of potential impacts; the only mention of this barnacle that I found in the EIR is in the context of shoreline composition (i.e. dead barnacle shells) and salinity. This concerns me very much, because the survival of this barnacle population will be significantly threatened by the current design of this project, as will other vital organisms found in and around the Salton Sea, yet <i>B. Amphitrite Saltonensis</i> has apparently been overlooked. I have attached my comments to this letter, for a total of 3 pages including this page. Thank you.	Please refer to the response to Geraci-1.
Jeff Geraci	Geraci-3	This concern applies to all aquatic organisms found within the Salton Sea, not just the barnacle population. As noted, this project is to be implemented in phases, and the initial phase of the project will create a relatively small waterbody as habitat, in comparison to the size of the current sea. This could present significant problems for the biota, since the response of small waterbodies to environmental stressors (e.g. pollution, temperature distribution, nutrient loading, oxygen depletion) is much faster and more severe than with larger waterbodies. With larger waterbodies, the changes are more gradual, there is more potential for dilution and dispersal, and in some cases organisms can flee to a more suitable area within the waterbody- that is not possible within a smaller waterbody such as with the proposed project design.	The SCH Project is not a phased project. It is proof-of-concept project that is intended to test concepts that could inform future restoration efforts should funding become available. Funds are not available for larger restoration projects at this time. No text revisions are required.
Jeff Geraci	Geraci-4	In addition, the change in hydrodynamics will be perhaps one of the most significant impacts of the project as a whole. The hydrodynamics of water movement within the proposed initial phase will result in enormous impacts based on the morphometry of the basin, its stratification structure, and the reduced amount of surface area exposed to the wind.	It is not clear what impacts are being referred to. Hydrodynamics of the SCH ponds will be different than at the Salton Sea, but the Project would not affect the hydrodynamics of the Sea. Considerable study has been given to how to best design the SCH Project to support targeted fish and bird species, but this is a proof-of-concept project and information gathered regarding successes and failures will be used to inform potential future projects. No text revisions are required.
Jeff Geraci	Geraci-5	Finally, suspended silts and sediments are often deadly to barnacle populations, interfering with propagation, respiration, settlement of cyprids and filter feeding. Construction and maintenance of the berms, as proposed, will have a very significant short and long term impact on barnacle colonies in terms of excessive suspended silt and sediment, and these impacts must be mitigated.	Although suspended sediments can be deadly to barnacle populations, the SCH Project site is in an area with predominantly soft substrate that does not provide attachment sites for barnacles and few to none would be present to be affected by construction activities. Furthermore, the SCH Project would affect only a small portion of the Sea's shoreline and habitat for barnacles. Therefore, no mitigation is needed. No text revisions are required.
Jeff Geraci	Geraci-6	The initial phase of the project, as proposed, is insufficient in size. There must be	The size of the SCH ponds is limited by available funding (refer to Master

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		substantial acreage added to the initial phase, as well as additional acreage designated for deep water habitat that will allow fauna to escape hostile conditions and will facilitate dilution, flow, and distribution of temperature. Deep water habitat is also crucial for maintaining much needed diversity in such a small ecosystem. There must be a substantial increase in the total volume of water of the initial phase, and the barnacle populations must be protected from the highly turbid water that would result from berm construction and maintenance.	Response 4, Project Funding). The ponds are being designed to provide habitat diversity to the extent that is practicable and consistent with the goal of supporting fish and wildlife species dependent on the Salton Sea. Barnacles are not one of the targeted species. No text revisions are required.
Jeff Geraci	Geraci-7	Barnacles require suitable substrate for settlement, which includes hard or otherwise rigid materials, preferably in close proximity to the waters surface where there is plentiful oxygen exchange and water movement. Note also that once a barnacle is settled, that settlement is permanent and it is impossible for the organism to detach and migrate should environmental conditions become unsuitable. Having said that, there is nothing noted in the EIR that suggests there will be suitable substrate for the barnacle population to even exist, let alone thrive. It is not a valid argument to assume that the barnacles will simply "find a way" to survive, given that they are sometimes considered a "nuisance" or "bio-fouling" organism; that is not good science and it is not an acceptable form of mitigation under CEQA.	Please refer to Master Response 3, Project Scope. Barnacles are not a targeted species of the SCH Project. Although the SCH ponds are not being designed specifically to support a barnacle population, some of the slope protection on the berms will likely provide hard substrata for barnacle attachment. No text revisions are required.
Jeff Geraci	Geraci-8	Mitigation measures must be implemented to ensure the survival and continuation of the sub-species <i>B. Amphitrite Saltonensis</i> . Mitigation measures must be proposed for creating suitable artificial substrate within the project, beginning with the initial phase. This substrate should be strategically located at specific depths to ensure both optimal oxygen levels and flow rates for feeding and settling. Substrate could take the form of quarried rocks situated on the proposed berms as rip-rap, or as partially submerged rock formations on the shoreline, provided the threat of high suspended solids is mitigated as well.	Please refer to the response to Geraci-5. Effects of increased salinity and receding shoreline in the Sea are not caused by the Project and do not need to be mitigated. No text revisions are required.
Jeff Geraci	Geraci-9	Impacts to the Salton Sea's barnacle population could have serious detrimental repercussions on other sea life, and therefore, those impacts must be adequately mitigated under CEQA. Barnacle colonies within the Salton Sea can be considered an "umbrella" species that provides habitat not just for itself but for other benthic fauna as well. For example, the native pileworm (<i>Neanthes Succinea</i>) is a vital food staple for fish, and for both the native bird population and seasonal birds who migrate along the Pacific flyway (some of which are listed in the ESA). Barnacle colonies provide ideal habitat for many benthic organisms including pileworms, amphipods, ostracods, etc., offering both shelter and a renewable food source. Salton sea barnacle colonies host a diverse community of benthic organisms whose symbiotic relationship with other Salton Sea organisms must be protected and preserved.	As noted in responses to Geraci-5, Geraci-7, and Geraci-8, loss of barnacles in the Sea would not be caused by the SCH Project, and the proposed ponds are not being designed to specifically support barnacles and other macrofauna that have been present in the Sea. The design would provide habitat for invertebrate macrofauna that may develop given the salinity and other water quality conditions in the ponds, and it would provide forage for fish. No text revisions are required.

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Jeff Geraci	Geraci-10	There is the need to incorporate mitigation measures into the SHCP project to preserve and protect the <i>B. Amphitrite Saltonensis</i> population, including but not limited to, incorporating suitable artificial substrate and re-designing the water basins to optimize the hydrodynamics of the proposed basins.	Please refer to the response to Geraci-1 regarding the scope of the SCH Project. The SCH Project would not result in significant impacts on barnacle populations; thus, no mitigation is necessary. No text revisions are required.
Jeff Geraci	Geraci-11	As I mentioned above, this sub-species of barnacle (<i>B. Amphitrite Saltonensis</i>) was first described a sub-species in 1949 by F.L. Rogers and later retained as valid by Henry & McLaughlin in 1975. In 1992, P.T. Raimondi reaffirmed this statement after detecting differences in larval morphology and development when comparing to <i>B. Amphitrite Amphitrite</i> . This unique sub-species of <i>B. Amphitrite Saltonensis</i> exists nowhere else in the world but at the Salton Sea, and without adequate mitigation, the public could lose this unique and valuable resource.	See response to Geraci-8.
Patrick J. Maloney	Maloney-1-1	A. Correspondence with the SWRCB concerning Statements of Water Diversion and Use for Colorado River diversions germane to the water source for the Project. These statements notify the world of claims to water that may flow into the Salton Sea, which claims would be superior to any claims of third parties to the water. As the correspondence illustrates, these statements substantially predate the present Draft EIR. Attachment 1 includes: 1. Summary of Water Diversion Statement Filings 2. May 12, 2006 Osias letter to Whitney 3. May 16, 2006 Maloney letter to Whitney 4. August 30, 2006 Maloney letter to Grober 5. April 22, 2010 Virsik letter to Whitney 6. June 16, 2010 Virsik letter to Whitney 7. July 21, 2011 Virsik letter to Hoppin 8. September 22, 2011 Virsik letter to Evoy	Please refer to Master Response 6, Water Rights. Attachments to this comment letter are posted on www.water.ca.gov/saltonsea .
Patrick J. Maloney	Maloney-1-2	B. The Draft EIR relied in large part on a PEIR for a project that has not been approved by the Legislature of the State of California. (Final Programmatic Environmental Impact Report (Final PEIR) and Salton Sea Ecosystem Restoration Study 2007.) Since the Legislature has never approved any project, the time in which to challenge the PEIR has not lapsed. Public Resources Code §§ 21108, 21152, and 21167. The present Draft EIR is therefore relying on a PEIR that is untested and still subject to revision or invalidity. In addition, there are fundamental flaws with that PEIR and we have attached our comment at Chapter 8, page 137, #IG-16 (included in Attachment 1). <i>Note: Comment #16 was included in the Final PEIR and is reproduced here: However, the Consortium continues to be concerned that, in connection with the</i>	The Draft EIS/EIR primarily relied on the PEIR for the description of the No Action Alternative, although prior to the issuance of the Draft EIS/EIR, this information was reviewed to ensure that it was applicable. This information also was updated where needed to reflect changes that have occurred since the PEIR was issued. The Draft EIS/EIR also relied on the PEIR for certain descriptions of existing conditions, although these also were reviewed to confirm their applicability and updated as appropriate. The PEIR was prepared by DWR and DFW, two of the three agencies responsible for preparing the Draft EIS/EIR, who believe the information used in the PEIR and SCH Draft EIS/EIR to be accurate. The fact that the PEIR has not been subject to legal challenge does not invalidate the accuracy of the information that it contains. Regarding comment #IG-16, the Natural Resources Agency complied with the

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		<i>preparation of the DPEIR, the State did not make a greater effort to hire consultants reflective of the diversity of the Imperial Valley community, which will be most impact (sic) by Salton Sea Restoration. The Consortium has made a significant effort in its hiring of its Advisors and developing its proposal and the Consortium believes it is in conformity with the spirit of the State of California on this issue as set forth in Public Utilities Code section 8283. The Consortium in its ultimate construction of this project plans to follow the spirit of Public Utilities Code section 8283. The State's behavior to date, however, does not.</i>	State contracting requirements. The referenced section of the Public Utilities Code does not appear to apply to this study. No text revisions are required.
Patrick J. Maloney	Maloney-1-3	<p>C. Briefs filed by the County of Imperial and others in the QSA Litigation. QSA Coordinated Civil Cases, C064293, California Court of Appeal, Third Appellate District. These briefs more thoroughly describe the issues that remain pending before the Court of Appeal. The case is scheduled for oral argument on November 21, 2011. The QSA trial court decision and the issues raised in these briefs raise questions about many of the factual assumptions on which the Draft EIR is based. Until there is resolution of these issues it makes no sense to go forward with a proposed Project. Pointedly, the PEIR recognized as much: "The discussion of Salton Sea restoration cannot take place without recognizing the Quantification Settlement Agreement (QSA) signed in 2003." Appendix H Ecosystem Restoration Study 2006, Salton Sea Ecosystem Restoration Program, p. H-1. The attached briefs include:</p> <ol style="list-style-type: none"> 1. Morgan-Holtz Parties - Ronald Leimgruber and Larry Porter's Brief 2. Imperial County Air Pollution Control District's Opening Brief. 3. County of Imperial's Opening Brief 4. POWER's Opening Brief 5. Imperial County Air Pollution Control District's Reply Brief 6. County of Imperial Reply Brief 7. County of Imperial and Imperial County Air Pollution Control District's Brief in Response to Amici Curiae of Audubon California, et al. 8. Cuatro Del Mar's Combined Answer to Amicus Brief of Planning and Conservation League, et al. 	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). Please refer to the response to ICAPCD-1.
Patrick J. Maloney	Maloney-1-4	<p>D. Two 2011 Resolutions from the Imperial irrigation District that raises issue about the flow into the Salton Sea. Attachments include:</p> <ol style="list-style-type: none"> 1. IID Resolution 3-2011 2. IID Resolution 27-2011 	<p>This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). IID Resolution 3-2011 calls on the State of California to adopt and fund a restoration alternative for the Salton Sea that includes mitigation of air impacts and preservation of habitat as the most critical components. This does not address the SCH Project.</p> <p>IID Resolution 27-2011 addresses IID's petition to the State Water Resources</p>

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			Control Board to amend their existing mitigation requirements. This is not a part of the project analyzed in the Draft EIS/EIR. The lead agencies are not required to speculate about the outcome of a legal process that could yield many different outcomes.
Patrick J. Maloney	Maloney-1-5	A. The EIR drafters have not examined other projects around the country and the world to determine if it is necessary to spend ten years examining the "proof of concept." The EIR drafters are assuming that they have to re-invent the wheel.	This is a unique project in a unique setting (e.g., in terms of soils conditions, water quality, climate extremes). The design team is using information from numerous other projects to inform the design. The operations framework has relied on, and will continue to rely on, information from other relevant studies, such as the USGS/Reclamation ponds (refer to Section 1.6, Development of the Salton Sea Species Conservation Habitat Project). Input also has been provided by Dr. Kevin Fitzsimmons (University of Arizona), a recognized expert in tilapia aquaculture in estuarine and saline environments globally, including the Salton Sea basin. The 10-year proof-of-concept period was identified to account for ample time to evaluate the numerous variables involved and to allow time to account for conditions that would occur after 2017, when IID stopped providing mitigation water to the Salton Sea. ICAPCD-1
Patrick J. Maloney	Maloney-1-6	B. The Drafters failed to consider the value of lands for agricultural purposes that would be created from the reduction of flows. Instead, the drafters assume without analysis that the "proof of concept" Project must be placed only on the sites analyzed.	The potential to reclaim land for agricultural purposes at the site of the SCH ponds was considered in the Draft EIS/EIR, but was considered speculative at this time (Section 3.19 Socioeconomics, Impact SOC-4. NEPA (section 1508.8(b)) requires that an EIS must make a good faith effort to explain the effects that are not known but are "reasonably foreseeable." Speculation is not required. The CEQA Guidelines (section 15145) also indicate that if a lead agency finds that an impact is too speculative for evaluation, it should note its conclusion and terminate discussion of the impact. As indicated in comment IID-34, IID, which is the landowner for all alternative pond sites except those involving private ownership in the Wister Beach area, has agreed that reclamation of land for agricultural purposes is speculative. The statement regarding the lack of analysis in site placement is not correct. Section 2.2 and Appendix B detail the extensive screening process that was used to identify sites and project components. The availability of a nearby, suitable water supply was a critical requirement. Sites near the Whitewater River were eliminated due to lack of adequate water supply. Use of water from agricultural drains and groundwater also was considered as water sources but eliminated for reasons described on page 2-4, lines 32-37. No text revisions are required.
Patrick J. Maloney	Maloney-2-1	We just received in this afternoon's mail the attached letter dated 10-13-11 and enclosures and have had no opportunity to review it yet. This appears to relate to point C in our comments of the same date. If appropriate, we will forward further comments after review of this latest development. Encl. October 13, 2011 Herrema letter to Virsik Joint Petition for Modification of	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). The attachment to this comment letter is posted on www.water.ca.gov/saltonsea .

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		Revised Order WRO 2002-0013	
Don Hedgepeth	Hedgepeth-1	I think Alternative 3 is the best of the six Alternatives. Thank you for holding the meeting in Palm Desert on Sept. 15, 2011	This comment is noted.
Public Hearings			
Calipatria			
Mike Morgan	C-1	One question I would have, have you and this project affirmed and created a right of water for the use in this project? As you know, the New River is claimed by Metropolitan Water District and possibly the IID.	Please refer to Master Response 6, Water Rights.
Mike Morgan	C-2	I think part of an EIR you have to have a – if you're planning to use water in a project, you have to have it – you have to obtain – you have to own it. You have to be able to secure it. You can't just take it. And so I just didn't know if that was addressed yet in this project.	Please refer to Master Response 6, Water Rights.
Mike Morgan	C-3	Would the project be using Metropolitan's claimed water right than affirming their water right by putting it to beneficial use or would it be using someone else's right?	Please refer to Master Response 6, Water Rights.
Dave Van Cleef	C-4	Mine was more contextual, which is, is this the same project as Quick Start?	As discussed on page 1-8, lines 27-28, The SCH Project is consistent with the description of Early Start Habitat identified in the PEIR, but it is not the same as Early Start Habitat. No text revisions are required.
Bruce Wilcox (Imperial Irrigation District)	C-5	The IID board has already affirmed its support of this project with the board memo and we appreciate the level of coordination that we've seen from the State and from the consultant team in developing this, and we're really pleased with the progress you've made in the last year.	IID's support of the SCH Project and process is noted.
Chris Schoneman (Salton Sea National Wildlife refuge)	C-6	It would be, I think, convenient if the project was built kind of in a modular fashion so that in the future, assuming everything works out very well here and water levels continue to decline, maybe it even states this in the document, that the pumping capacity can be increased so that it can be built out further down the stream and extend the benefits of the habitat that's already out there.	The Project could be expanded in the future by adding additional area or diversion facilities. Any future expansion beyond what was analyzed in the Draft EIS/EIR will require additional environmental analysis. No text revisions are required.
Brawley			
Frank Bailey	B-1	I think you've come up with some great ideas, but how likely are we going to find the funding to be able to complete one of these projects? I would love to see some of these wetlands habitat go in. I've been asking for something, we've been -- when they were first developing some of the projects around the sea, I was asking them why don't we do something and try to save some of this habitat.	Please refer to Master Response 4, Project Funding.

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Frank Bailey	B-2	The second question, you know, being with funding, why was the number three alternative the preferred alternative and what are we looking at? In these projects do we have the funding to do any of this?	Please refer to Master Response 4, Project Funding. The reasons why Alternative 3 was selected as the State's preferred alternative are discussed in Section 7, Summary Comparison of Alternatives. No text revisions are required.
Daniel Santian	B-3	So this is my only interest to make sure that Imperial Valley residents will be considered first for jobs.	State contracting law requires competitive bids; thus, while it is reasonable to think that a number of jobs would be filled by local workers, this cannot be guaranteed. No text revisions are required.
Andy Horn	B-4	I'm sitting back here between two geothermal developers and I'm not sure that I see a great look of comfort or haven't heard those comments, and I've talked to a number of people who still have some concerns about this project and the potential of that to interfere or prevent some maximization of geothermal energy production in that area. I know you guys are aware of it, you've got it up on the board, but I think we need to do some more assuring of the geothermal people and people that rely on income from those sources and so it's going to see that you have taken it into consideration, but I just recall back from the first meeting I went to and they said don't worry, we're going to construct causeways out there that will support heavy vehicles and they can get out there and access for drilling and maintenance and so forth of geothermal facilities, and the second time and third time we went to the meeting and they said, oh, no, we've abandoned that, it's too expensive, and the commentary was that they're going to use native soils and those soils would not support heavy equipment. And I don't know what the design criteria are today, but I think we need to add a little more dialogue.	Please refer to Master Response 8, Compatibility with Geothermal Development.
Larry Grogan (Energy Source)	B-5	One of the things that bothers me when we see these plans that come in after we've done the huge Salton Sea Authority Plan with the State as part of the QSA, I think in three volumes, is there's not one mention of that in this document. And certainly when the final preferred design was made, 4200 acres was carved out of that as an overlay or whatever it is for geothermal development because they do recognize it.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). The Salton Sea Authority's plan is separate from the State's Salton Sea Ecosystem Restoration Project and is unrelated to the SCH Project. The Ecosystem Restoration Project also is an independent project. This project, and its relationship to the SCH Project, is described in Section 1.6.1. A comment on the design of either the Salton Sea Authority's plan or the Ecosystem Restoration Project is not a comment on the SCH Project.
Larry Grogan	B-6	Somewhere in all these exhibits there should be at least some recognition of what the resource area is so that we have something five years from now when we come back and everybody in the world is saying yeah, but this is what we approved because it was preferred Alternative Number 2A and there's nothing in there about geothermal. It's in the dialogue, but this is our plan, we plan to put these dikes out there, we plan to put this well, this pond here, we're going to put this fishing pond over here. Some of those fishing ponds that you show on the area there basically right now have a surface manifestation of boiling water at the	Geothermal resources are discussed in Section 3.13, Land Use. No text revisions are required.

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		surface. This is just south of Mullet Island and you have that entire fault zone through there that I would hate to have to put any type of wildlife habitat and depend on it staying necessarily with CO ₂ coming up and certainly with the possibility of hot springs coming up through that area.	
Larry Grogan	B-7	But other than that, can they be compatible, the answer is yes, but when you start putting plans with dikes, with causeways or whatever it is right now without having really a dialogue with the industry how we could develop it, then we've set ourselves up for problems in the future.	Please refer to Master Response 8, Compatibility with Geothermal Development. All of our geothermal coordination has been, and will continue to be, through IID. No text revisions are required.
Larry Grogan	B-8	As far as mitigation, let's face it. The State has almost no money to develop this thing, so you're going to be looking for someone to contribute to actually do some type of offsets. We don't mind that, but we'd like to be a part of the thing more up front before you put these lines on the map.	Project funding sources are addressed in Master Response 4, Project Funding; they do know include contributions from private entities. Please refer to Master Response 8, Compatibility with Geothermal Development for a discussion of coordination with geothermal developers. No text revisions are required.
Ted Martin	B-9	My question is why are we taking virgin land which we can make into geothermal? The wildlife preserve and state and the federal wildlife preserve, why can't we use those ponds that we already have and use that with the same thing? They're right along the Alamo River. Some of these guys know what I do for the district, but I'm not representing the district. I'm representing myself. Why can't we use the resources we already have? The ponds are there. I know these ponds need to be improved upon anyway. What is the problem with the land we already have instead of taking new land and taking this land out of production for geothermal and put it in that way?	As discussed in Section 3.13, Land Use, Impact LU-3, the SCH Project would be designed to minimize conflicts with other planned land uses, including geothermal development. The SCH Project is being designed specifically to provide fish for fish-eating (piscivorous) birds that are dependent on the Salton Sea (refer to Section 1.3 CEQA Project Goals and Objectives / NEPA Purpose and Need for additional detail), and this type of habitat is not available at the refuges in the area. No text revisions are required.
Palm Desert			
Dale Grajcer (Ph.D. fisheries U of BC)	PD-1	I have had fish farming in this valley for 37 years and I remarked in all the meetings -- on some of the meetings, and I am surprised first about the choice of the fish which is not local, Tilapia, it's not of the American continent, it's not North American, not South American. And why we choose a fish that doesn't belong here, we should try to get them out of here. Why do we choose that fish as our model in our experimentation.	Please refer to Master Response 1, Selected Fish Species.
Dale Grajcer	PD-2	I want to also correct something. I know that you get your money not only from the federal and the state but you get a lot of money, \$25 million from my water district, and that's my money, that's our money, local money, and our ratepayer has a lot to say and a lot to lose on it. You get also \$25 million from IID and \$25 million from San Diego. So the money is not entirely government, a lot of it is ratepayer money.	Please refer to Master Response 4, Project Funding.
Dale Grajcer	PD-3	You choose Tilapia because it happens to be around and despite the Fish and Game trying to keep them out of here. The Fish and Game then was told the Tilapia will take over any other species in the Salton Sea because they can go to	Please refer to Master Response 1, Selected Fish Species regarding the selection of tilapia. Fish experts from the Department of Fish and Wildlife were involved in making the selection of fish for the SCH ponds, and they also

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Name	Com. No.	Comment	Response/Issues
		higher salinity and lower salinity. You chose Tilapia because it can take the temperature, the high temperature, not the low, but you don't have enough people who knows fisheries. There are good schools in this country like Auburn and Alabama, Texas A & M in Texas, the Marine Institute in Maryland, and you didn't ask for any experts. Your experts are usually people from fish -- from game, not from fish and they know very little about fish. Now, we have a local fish who is a native to the Salton Sea, can take higher salinity, much higher, to 8.5, they can take the temperature a lot better than the Tilapia, and with the help of all the institutions that we have around here, we manage to eliminate forcibly out of the Salton Sea by mistake because we didn't know or people didn't know the fish travels up river then down river and is native to the Salton Sea, and we had the commercial fishery here in '42 of that abundant fish, not only that the fish is specialized in eating detritus, in other words it cleans the water.	consulted documentation by other experts in making decisions on species to select for the Project. No text revisions are required.
Dale Grajcer	PD-4	Okay. We are building ponds which are not -- if the Corps of Engineering is looking over it, engineering would be fine, but what are you going to do with it? Because I expect to have the same problem that we had always in the Salton Sea of having algae bloom. With Tilapia you have algae bloom. Without Tilapia we will have algae bloom. The only thing that might stop it is mullet. You have algae bloom, you'll have fish kills, the same as you have now, you'll have smells and you'll be sued for it. You'll have H ₂ S, which is dangerous to people living on fish, and if you don't take care of it, those beautiful ponds that you're building are beautiful and I know the Corps of Engineer will do a beautiful job for us, but we'll have nothing but trouble. We'll have to aerate it and you don't have any provisions for it. Of course -- it -- it can be expensive because now you have to bring it back. You'll have to have hatcheries to grow mullet, fishery to start them, put them in the Salton Sea and you can save the whole Salton Sea, not only the bottom. Mullet can take 8.5 percent salt. You can look it up in the literature. I don't have to do it for you.	Please refer to Master Response 1, Selected Fish Species regarding the selection of tilapia over mullet. H ₂ S does not taint fish meat; it is only present in high concentrations in the absence of oxygen, which can kill fish. High nutrient concentrations in the ponds from the influent water are likely to result in plankton blooms that have the potential to result in low dissolved oxygen levels that could cause fish kills. Monitoring will be conducted to determine if this happens and under what conditions so that adaptive management can be implemented to reduce or eliminate the problem. The potential for odors to result from fish kills was addressed in Section 3.3, Impact AQ-7, and it was concluded that this impact would be less than significant. No text revisions are required.
Chris Bogart	PD-5	I would just like to say I've been trying to come to the meetings over the past two years on this process. The last meeting was very vague and it was really very not very informative and poorly handled. The one before that was just a general introduction. Intervening time between the second meeting and today there has been very little sent to us informationally in the process. I got a Corps of Engineers thing. I read the website occasionally. I would like to protest the fact that the people and the public in this community are really not being included in this to the extent that they should.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). The public outreach process has complied with all regulatory requirements and is documented in Section 6.2, Consultation and Coordination.
John Kariotis (West Shores Salton Sea	PD-6	One of the comments, I think I can answer some of the people's questions, especially Dale's. This is for fish and birds and does not affect anything in the way of what the Salton Sea Authority's plans would have done in the way of	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion).

Name	Com. No.	Comment	Response/Issues
Growth Association)		People and economic development for the Salton Sea.	
Carrie Berman	PD-7	Are there any considerations for different species of fish outside of the Tilapia?	Please refer to Master Response 1, Selected Fish Species.
Leo Borunda	PD-8	<p>The water front is going down. Don't let that happen. Let's save the Salton Sea. Never mind all these other plans and put ponds here and ponds there and ponds over there. We don't need that. We need to save the Salton Sea. It's a beautiful body of water.</p> <p>I've been at the Salton Sea a little over 15 years and made over \$10 million at the Salton Sea and I've got ten properties and I've got the big ranch, 152 acres of land. So the thing is that the Salton Sea is ready to help us all and do things for us, but we've got to do things for the Salton Sea, not on the basis of putting a pond here and there and pond there. That's not necessary. If we did something and gave the water rights to San Diego a long, long time ago, this is a long time, it should be argued now that that was a mistake and it should not be done, and if we can't get that, let's get water from someplace, but let's not let the Salton Sea die, please. Let's not let it die. It's a beautiful, beautiful body of water and it should not be destroyed.</p>	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Mohammed Wasif	PD-9	I think what we are doing actually right now with 3700 acres, one of the best things that can ever happen, at least let's start with something, not to try and drag this and take this miles and miles across and say we are going to do this. This is not nothing magic that we can turn around. It requires millions and millions of dollars. And the salinity, desalinization is not an easy thing because you can't do it straight away. No, two years, I think it's one of the greatest things that has ever happened.	Your support of the SCH Project is noted.
Mohammed Wasif	PD-10	I'm so glad and the engineer and gentleman who explained everything is absolutely -- you know, I'm really proud of the fact at least something is happening instead of just going on, you know, and I don't know how non-profit organization complaint.	Your support of the SCH Project is noted.
Mohammed Wasif	PD-11	But I personally feel that we must have some sort of a lottery, Salton City lottery so that the people can put some money in and raise funds, maybe five years, ten years, whatever it takes, and then use that money and then we can have, you know, exit from Salton City into the sea by having, you know, exit by huge sort of pipes, maybe five, ten pipes or something like that to the shortest distance and that would be really remarkable, but they take time.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Mohammed Wasif	PD-12	But you know, I think I personally feel that what you people are doing right now with this meeting, it's wonderful. I'm so proud of you.	Your support of the SCH Project is noted.

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Name	Com. No.	Comment	Response/Issues
Paul Norman	PD-13	There's another water source and that's the Artesian wells going to the lake. Is there anybody doing that or thinking about establishing any parameters around those for water?	The use of groundwater is addressed in Section 3.11, Hydrology and Water Quality. Page 3.11-21, lines 19-26 concludes that groundwater currently is not a viable source for the SCH Project. No text revisions are required.
Linda Beal	PD-14	Is there a different kind of fish that could do better in the sea?	Please refer to Master Response 1, Selected Fish Species.
Linda Beal	PD-15	Also, could we -- if we get so many Tilapia, they're just breeding like crazy, is there a way we could harvest Tilapia at different times that could help the sea in some way? I don't know. They could be harvested in a big way so we wouldn't have so many die-offs and things like that.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration. This appears to be a comment on conditions at the Salton Sea, not on the SCH Project. No text revisions are required.
Linda Beal	PD-16	Also, what will this project do for the rest of the sea? How will it impact the rest of the sea? I know this is going to be good for the birds to eat different fish or whatever you may have in these other little ponds and things and is there any other kind of thing besides fish that you might be raising in these ponds for the wildlife?	Restoration of the rest of the Salton Sea is not the subject of the SCH Project EIS/EIR (refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration). Impacts of the SCH Project on the Salton Sea are addressed in the Draft EIS/EIR; for example, the Project's impacts on the Salton's Sea's water quality and surface water elevation are addressed in Section 3.11, Hydrology and Water Quality. As discussed in Section 1.3, The SCH Project's target species are those piscivorous (fish-eating) bird species that use the Salton Sea and that are dependent on shallow saline habitat for essential habitat requirements and the viability of a significant portion of their population. Thus, the Project specifically intends to provide fish as a food source. As discussed in Section 1.5.3, a number of other aquatic organisms that currently comprise (or recently comprised) the food web supporting fish in the Salton Sea, such as phytoplankton, zooplankton, and benthic and water column macroinvertebrates, or other species with similar habitat functions and food-web functions, would become established or would be introduced into the SCH ponds. No text revisions are required.
Kathy Cronemeier	PD-17	I want to know what the impact of your project on the Salton Sea will be, if it will be taking down the water level and creating more air pollution because as it dries up, we know that the air pollution is going to be horrendous for the Coachella Valley.	The impacts of the SCH Project on the resources of the Salton Sea are addressed in the Draft EIS/EIR. The change in water surface elevation of the Sea that would occur under each alternative is discussed in Section 3.11, Hydrology and Water Quality under Impact HYD-1. As discussed in Section 3.3, Air Quality and Section 3.11, Hydrology and Water Quality, the SCH ponds would cover more playa than would be exposed as a result of the Project, reducing the potential for wind-blown fugitive dust. Thus, the Project would have a beneficial impact on air pollution from dust emission from exposed playa. No text revisions are required.

Name	Com. No.	Comment	Response/Issues
Margit Chiraco Reshay	PD-18	I think we ought to emphasize save the Salton Sea and not have all these little bitty things going on around it unless you can really prove to us that it's going to be a part of saving the Salton Sea. So I just really believe that we need to save that beautiful body of water. We go down there, we go around it, we enjoy looking at it, and it is indeed a visual treat for those of us in the desert and I would hate to see it go away.	Please see Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Imari Kariotis (West Shore Salton Sea Growth Association)	PD-19	Mr. Davis, I had a talk to you on the phone and so did my husband about holding a meeting on the west shores. Most of the state meetings have been on the west shores. There are several buildings you guys could have held a meeting in. Most of the people in our membership felt slighted that there wasn't one.	Please refer to the response to PD-5.
Imari Kariotis	PD-20	There hasn't been very much communication between the State and the people. Now, IID, CCWD, yes, DWR, but you haven't come to the small people and we want you guys to do that because we have ideas and you really can't do it in an hour and a half.	Please refer to the response to PD-5.
Candace Weber	PD-21	So I think the ponds are a great start. I think -- I don't know if this has been stated or not, but a big, big issue is I see with my students, who to me represent the public in general to a certain degree, is a lot of lack of information, misinformation, the belief of the myths about the Salton Sea that it's toxic, it's a wasteland. It does have a smell to it, they don't understand why. All these things that we already know about, and I don't -- I think my purpose -- my point of this is, is there some way that we or the agencies, Fish and Wildlife can partner with the local news agencies, the Desert Sun, the Nightly News, and get the correct information out there?	Your support of the SCH Project is noted. An extensive public outreach process has been followed and is outlined in Section 6.2, Consultation and Coordination. No text revisions are required.
Candace Weber	PD-22	The water transfers are a big issue for the Salton Sea, so that's why the ponds are a great way to start to figure out how to save habitat to save the whole Salton Sea. I honestly hadn't heard it's possible to save the whole sea because of the QSA and the public doesn't understand the issue of water out here in the west. The CVWD, all know there's an over-demand for the Colorado River. We just don't know. People just don't know. If you want people to get behind the Salton Sea and help push for state funding to get these plans and these ponds set, you need a public who is educated, not just the few in the room here. You know what I'm saying. So there's some way we have to partner with the public news agencies and get correct information out there and get the reporters to care about it. That's all I have to say.	This comment is noted. It is not a comment on the SCH Project. No text revisions are required.
Peter Nelson	PD-23	Tuesday the IID Board resolved to ask the State Water Board to allow it to stop putting QSA mitigation water into the sea, thereby setting the stage to sell nearly 400 or 5,000 acre feet of additional water to coastal communities.	This comment does not raise a significant environmental issue specific to the SCH Project (please refer to Section 2.3 of the Final EIS/EIR for further discussion). The IID/SDCWA petition to the State Water Resources Control

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Name	Com. No.	Comment	Response/Issues
		How would that action affect this project, either positively or negatively, and as Secretary John Lehr (sic) described this project not as species conservation habitat but as Early Start habitat. How would that action affect any future projects positively or negatively?	Board to amend their existing mitigation requirements is not a part of the project analyzed in the Draft EIS/EIR. The lead agencies are not required to speculate about the outcome of a legal process that could yield many different outcomes.
Dale Grajcer	PD-24	Everybody knows or should that the Salton Sea at the moment evaporates nearly two million acre feet of water a year. That affects the climate of the whole valley. Without it, we're being exempted because we have the same conditions as Death Valley. Without it would be 130 degrees in the summer, not 120, and I don't know about -- education just to be sure, but remember that it's 2 million acre feet evaporates and that affects the temperature very heavily, both in the summer and in the winter.	This comment is noted. It is not a comment on the SCH Project. No text revisions are required.
Mohammed Wasif	PD-25	I've got to point out the federal government has got to take interest in this. We have money funds to go to Iraq, all the places in the world. We don't have money to spend in our own home. This body of water is one of the best things that can ever happen in California. So close to San Diego, so close to so many places. It could be absolutely a central beautiful area with, you know, thousands and thousands of people coming, only the water would be used. So I think somebody has got to bring the President over here and say this is a body of water we have and you know, the only thing is it's dead water. Then he would say what can we do about it. So we've got to find some way of raising funds for this area. That is the only thing I would wish the people -- and I'm very proud of the fact, but we should progress more and do it more. And right now I know China is taking interest in everything in the world. You go to Saudi Arabia, they're doing thousands of acres of land, they're doing railway, doing hundreds and thousands of things. Go to Kuwait, you go everywhere, China. Give us a bid on it to desalinize this area. Tell us about it. Then we go to the federal government.	Please refer to Master Response 4, Project Funding.
Kerry Berman (Desert Tours)	PD-26	Since the we have 4.4 billion acre feet of water coming from the Colorado River and there is an agreement with the Metropolitan Water District and the Coachella Valley Water District up until about 2035, but right now we're overdrafting the aquifer by 16 to 30 percent a year as a consequence. I would like to know what affect that's going to have on the pumping stations in creating these new water environments.	The intent and meaning of this comment are not clear. The SCH Project pumps do not use groundwater; rather, they would pump water from the Salton Sea and the New or Alamo rivers. No text revisions are required.
Leo Borunda	PD-27	...anything we can do to preserve the Salton Sea is the most important thing.	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.
Borunda	PD-28	So it's something that has been there for a long, long time and then it dried up for a while and then in 1904 up again into a beautiful body of water. Let's preserve it.	This comment is noted. It is not a comment on the SCH Project. No text revisions are required.
Bruce Wilcox	PD-29	First I want to say we support the species conservation habitat and have from the	Your support of the SCH Project is noted.

Name	Com. No.	Comment	Response/Issues
(IID)		beginning. We think it's a great start for restoration of the Salton Sea.	
Jeff Geraci* (Water Quality Control Board in Palm Desert)	PD-30	We are in approval of the project, of course.	Your support of the SCH Project is noted.
Jeff Geraci* (Water Quality Control Board in Palm Desert)	PD-31	I had a question about barnacles. I know that barnacles in high density can actually improve water quality, if not water clarity, allowing sunlight to penetrate and dry the ecosystem. I was wondering are there any mitigation efforts to preserve or protect the barnacle population which is actually a subspecies of <i>B. amphitrite</i> , which is found on the California coast because this is a unique subspecies of the barnacle that exists only in the Salton Sea. So I was wondering are you going to have any kind of tide pools or any kind of mitigation to preserve those barnacles or are we just going to let them go?	Please refer to the response to Geraci-1.
Lucinda Robson	PD-32	Are all the cities in the Coachella Valley aware of the situation with the environment if something happens to the Salton Sea and are they on board with helping save their own town and their own tourism and their own environment? And is the State aware or is the State taking care of the population in the Coachella Valley from this potential hazardous environment that could result if the Salton Sea is not saved?	Please refer to Master Response 2, Relationship to the Programmatic Environmental Impact Report and overall Salton Sea Restoration.

EDITS TO THE DRAFT EIS/EIR

The following corrections and/or clarifications have been made to the Draft EIS/EIR text. These include minor corrections to improve writing clarity, typographical errors, and consistency; and corrections or clarifications in accordance with specific responses to comments, as described in Section 2.0. Revisions also include refinements to the preferred alternative that have been implemented in order to minimize the amount of disturbance required and to proceed in a more cost-effective manner, some of which are outside of the original Project footprint identified in the Draft EIS/EIR. These refinements include moving the saline pump station closer to shore or in an upland area next to the Sea at the north end of Kornbloom Road (although Section 2.4.2.6 of the Draft EIS/EIR notes that “Alternatively, the saline pumping station may be constructed at the outer perimeter of the SCH ponds”). They also include running the saline pipeline from this pump station along Kornbloom Road, West Bowles Road, and an unnamed road rather than in the Salton Sea; a segment of this pipeline also could be routed just west of Kornbloom Road along the edge of the pond site; this area was included in the Draft EIS/EIR. Saline water would be brought to the shore through a channel excavated in the sea bed. Such a channel was considered in Section 2.4.1.13 of the Draft EIS/EIR, which stated that “Another option would be to excavate a channel to bring the seawater to a pump station located closer to the Project site.”

The text revisions are organized by the section, page number(s), and line number(s) that appear in the Draft EIS/EIR. Deletions are indicated by strike-through text (~~deleted text~~), and new text is indicated by underlined text (new text). Changes were made in the following sections and appendices:

- Section 1.0: Introduction
- Section 2.0: Alternatives
- Section 3.1: Aesthetics
- Section 3.2: Agricultural Resources
- Section 3.3: Air Quality
- Section 3.4: Biological Resources
- Section 3.8: Geology, Soils, and Minerals
- Section 3.9: Greenhouse Gas Emissions/Climate Change
- Section 3.11: Hydrology and Water Quality
- Section 3.13: Land Use
- Section 3.19: Socioeconomics
- Section 4.0: Cumulative Impacts
- Section 6.0: Compliance, Consultation, and Coordination
- Appendix D: Project Operations
- Appendix I: Selenium Management Strategies
- Appendix J: Summary of Special Studies Supporting the EIS/EIR Impact Analysis

EXECUTIVE SUMMARY

Section ES1.4 Draft Section 404(b)(1) Alternatives Analysis Basis and Overall Project Purpose, page ES-3, lines 23-24

The overall Project purpose is to develop a range of aquatic habitats along the exposed shoreline of the Salton Sea that will support fish and wildlife species dependent on the Salton Sea in Imperial County, California.

Section ES1.8.3 Cooperating, Responsible, and Trustee Agency Actions, page ES-6, line 17

Under NEPA, cooperating agencies are agencies other than the lead agency that have discretionary authority over a proposed action, jurisdiction by law, or special expertise with respect to the environmental impacts expected to result from an action. The U.S. Bureau of Reclamation is a cooperating agency for the preparation of this EIS/EIR ~~and because it~~ has special expertise related to restoration planning, as well as jurisdiction by law over lands located near the Project area. The USFWS also is a cooperating agency because portions of the ponds at the New River sites would be located on land that is part of Sonny Bono Salton Sea National Wildlife Refuge and managed by the USFWS. Lastly, the U.S. Bureau of Land Management (BLM) is a cooperating agency because it manages land within the Salton Sea that may be needed for Project facilities, access, or construction materials.

Section ES1.8.3 Cooperating, Responsible, and Trustee Agency Actions, page ES-6, lines 29-31

The California State Lands Commission (SLC) is a trustee agency, defined in section 15386 of the CEQA Guidelines as "...a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California." The SLC will use the EIS/EIR in determining whether to issue a lease agreement for impacts on the Salton Sea for any portion of the SCH Project within its jurisdiction. The SLC has determined that ~~one two~~ two parcels included in the potential SCH Project sites ~~is are~~ within its jurisdiction. Parcel 020-010-030 is located within the Alternatives 4 and 6 sites, and its use would require a lease agreement with the SLC. Additionally, a portion of Alternatives 4, 5, and 6 are within Parcel 020-010-040, and its use could require a mineral lease from the SLC if any soils were removed from this parcel as part of the SCH Project.

Section ES1.9 Required Permits and Consultations, page ES-7, lines 1-6

The following permits and consultations are expected to be required:

- Federal CWA section 404 Standard Individual Permit from the Corps;
- Federal CWA section 401 water quality certification from the Colorado River Basin Regional Water Quality Control Board;
- National Historic Preservation Act section 106 consultation with State Historic Preservation Office;
- Federal Endangered Species Act section 7 consultation with the USFWS;
- California Fish and Game Code section 1602 or 1605 Streambed Alteration Agreement from DFG;
- California Endangered Species Act section 2081 Incidental Take Permit from DFG;
- SLC lease agreement for impacts on the Salton Sea for the use of parcel 020-010-030 and potential lease agreement for use of parcel 020-010-040 if soils were removed from this parcel; and

- IID coordination and review of Project design;
- IID Board approval of the SCH Project's use of agricultural return flows in the Alamo and New rivers, the tie-in to existing 3-phase power service; and lease agreement for Project land;
- IID Board approval of the SCH Project lease agreement.; and
- Imperial County floodplain encroachment permit for pump facilities on the river bank;
- Authority to Construct permit from the Imperial County Air Pollution Control District for all construction equipment with 50- horsepower or greater; and
- Right-of-way grant for use of BLM land.

Additionally, the Imperial County Air Pollution Control District (ICAPCD) would require preparation of separate construction phase and operations phase a Fugitive Dust Control Plans under Regulation VIII, Fugitive Dust Rules (800–806). Per Regulation VIII, Fugitive Dust Rule 801, these plans would be made available to the ICAPCD prior to the start of any SCH Project construction activities and written notification to the ICAPCD would be made via fax or mail within 10 days prior to commencement of any SCH Project construction activities.

Easements would be required from landowners for Project facilities during construction and operations.

Haul permits and encroachment permits may be required for the use of area roadways during construction.

Federal Standard Form 299, Application for Transportation and Utility Systems and Facilities on Federal Lands, would be required for use of any Federal parcel for Project facilities, access, or construction materials.

SECTION 1.0 INTRODUCTION

Section 1.2 Background, page 1-3, added after line 38

IID and the San Diego County Water Authority filed a petition with the State Water Resources Control Board on November 18, 2011 requesting that mitigation water to the Salton Sea stop at the end of 2013. In lieu of that requirement, the petition proposes to establish alternate habitat for Salton Sea wildlife and other resources (Notice of Petition for Change for Permit 7643 (Application 7482)).

Section 1.4 Draft Section 404(b)(1) Alternatives Analysis Basis and Overall Project Purpose, page 1-6, lines 35-36

The overall Project purpose is to develop a range of aquatic habitats along the exposed shoreline of the Salton Sea that will support fish and wildlife species dependent on the Salton Sea in Imperial County, California.

Section 1.9.3 Cooperating, Responsible, and Trustee Agency Actions, page 1-11, lines 9-11

The California State Lands Commission (SLC) is a trustee agency, defined in section 15386 of the CEQA Guidelines as "...a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California." The SLC will use the EIS/EIR in determining whether to issue a lease agreement for impacts on the Salton Sea for any portion of the SCH Project within its jurisdiction. The SLC has determined that one-two parcels included in the potential SCH Project sites ~~is~~ are within its jurisdiction (Figure 1-2). Parcel 010-020-030, ~~shown on Figure 1-2,~~ is

located within the Alternatives 4 and 6 sites, and its use would require a lease agreement with the SLC. Additionally, a portion of Alternatives 4, 5, and 6 are within Parcel 020-010-040, and its use could require a mineral lease from the SLC if any soils were removed from this parcel as part of the SCH Project.

Section 1.10 Required Permits and Consultations, page 1-12, lines 21-24

The following permits and consultations are expected to be required:

- Federal CWA section 404 Standard Individual Permit from the Corps;
- Federal CWA section 401 water quality certification from the Colorado River Basin Regional Water Quality Control Board;
- National Historic Preservation Act section 106 consultation with State Historic Preservation Office;
- Federal Endangered Species Act section 7 consultation with the USFWS;
- California Fish and Game Code section 1602 or 1605 Streambed Alteration Agreement from DFG;
- California Endangered Species Act section 2081 Incidental Take Permit from DFG;
- SLC lease agreement for impacts on the Salton Sea for the use of parcel 020-010-030 and potential lease agreement for use of parcel 020-010-040 if soils were removed from this parcel; and
- IID coordination and review of Project design;
- IID Board approval of the SCH Project's use of agricultural return flows in the Alamo and New rivers, the tie-in to existing 3-phase power service; and lease agreement for Project land;
~~— IID Board approval of the SCH Project lease agreement; and~~
- Imperial County floodplain encroachment permit for pump facilities on the river bank;
- Authority to Construct permit from the Imperial County Air Pollution Control District for all construction equipment with 50- horsepower or greater; and
- Right-of-way grant for use of BLM land.

Additionally, the Imperial County Air Pollution Control District (ICAPCD) would require preparation of separate construction phase and operations phase a Fugitive Dust Control Plans under Regulation VIII, Fugitive Dust Rules (800–806). Per Regulation VIII, Fugitive Dust Rule 801, these plans would be made available to the ICAPCD prior to the start of any SCH Project construction activities, and written notification to the ICAPCD would be made via fax or mail within 10 days prior to commencement of any SCH Project construction activities.

Easements would be required from landowners for Project facilities during construction and operations.

Haul permits and encroachment permits may be required for the use of area roadways during construction.

Federal Standard Form 299, Application for Transportation and Utility Systems and Facilities on Federal Lands, would be required for use of any Federal parcel for Project facilities, access, or construction materials.

Section 1.12 Scope and Contents of the Draft EIS/EIR, page 1-15, lines 2-3

~~Based on 33 CFR part 325, Appendix B, the appropriate scope of analysis for the Federal review of the selected action consists of the entire Project footprint.~~

The Project does not represent merely a link in a corridor-type project. The Project is water dependent, focused on restoration of aquatic habitat, and therefore, the majority of the Project footprint is within Corps' jurisdictional areas, although associated infrastructure and construction staging areas are located in adjacent upland areas. Given the overall Project purpose, the extent and varied location of the Corps' jurisdictional areas throughout the Project site, the location of the proposed Project on land that is under Federal jurisdiction, and in consideration of the Endangered Species Act issues involved, the Corps has determined that there exists enough cumulative Federal control to require the NEPA review to include analysis of environmental impacts on the upland portions of the Project site in addition to the Corps' jurisdictional areas. Therefore, the appropriate scope of analysis for the Federal review of the proposed Project consists of the entire Project footprint. In these upland areas, the Corps will evaluate impacts on the environment, alternatives, mitigation measures, and the appropriate state or local agencies with authority to implement such measures if they are outside the authority of the Corps.

SECTION 2.0 ALTERNATIVES

Section 2.2.1 Exclusionary Criteria, page 2-4, line 19

Available water rights. The Whitewater River is designated by the State Water Resources Control Board as a fully appropriated stream from the Salton Sea to the headwaters; thus, no water would be available for the SCH Project. The New and Alamo rivers are not designated as fully appropriated. Metropolitan Water District of Southern California has applications pending for appropriative rights for essentially all the available water in both New and Alamo rivers, but has not prepared the required environmental document for these water rights applications, and so the State Water Resources Control Board has not acted upon these applications. In addition, IID has asserted that it has the right to the use of all agricultural return flows within its service area, which is the majority of flows in the New and Alamo rivers, and that the SCH Project must obtain IID's consent to use these return flows.

Figure 1-2 Portion of SCH Sites under State Lands Commission Jurisdiction, page 1-13

The revised figure is on the following page.

SECTION 3.0
EDITS TO THE DRAFT EIS/EIR

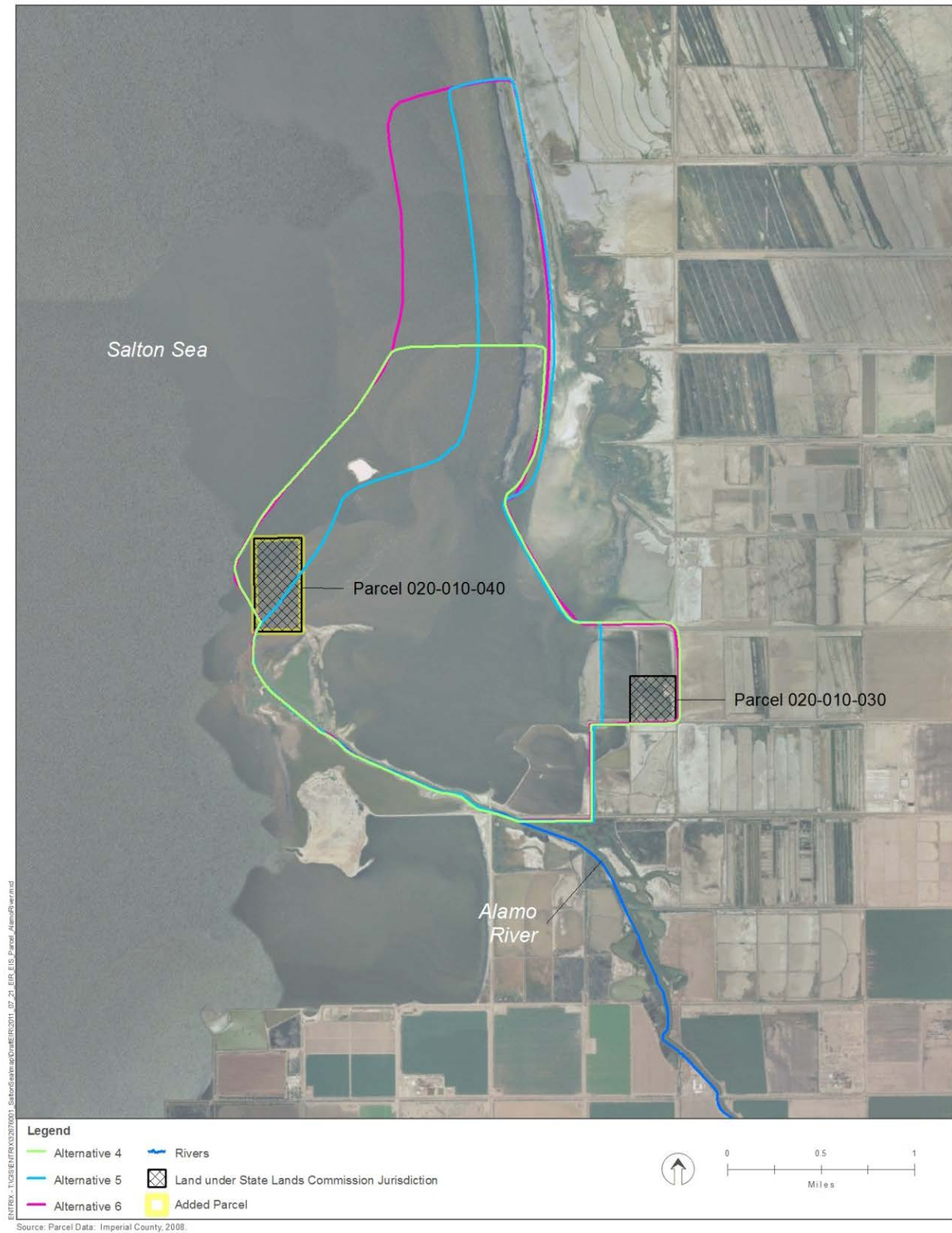


Figure 1-2 Portion of SCH Sites under State Lands Commission Jurisdiction

Figure 2-2 SCH Project Alternative Locations, page 2-8

The revised figure is on the following page.

Section 2.4.1.7 Water Supply, page 2-15, line 42

The water supply for the Project would come from the brackish New or Alamo rivers, depending on the alternative, and the Salton Sea. As discussed in Section 2.2.1, Exclusionary Criteria, these are the only feasible water supplies for the SCH Project. The available water supplies currently appear to be adequate to supply the SCH ponds as proposed; however, the size of the ponds could be reduced in the future if available water supplies were reduced. The salinity of the river water is currently about 2 parts per thousand (ppt), and water in the Sea is currently about 51 ppt. For reference, the ocean is about 35 ppt. Blending the river water and seawater in different amounts would allow for a range of salinities to be used in the ponds. Detailed modeling studies performed for this Project showed that increasing salinity through evapoconcentration (allowing the salinity to increase by evaporating the fresh water and leaving the salts behind) would not produce higher salinity ponds in a reasonable time frame (within months). The saline diversion would occur from pumps placed on a structure in or adjacent to the Sea. The river diversion would occur either by a gravity diversion from an upstream location or pumps located near the SCH ponds.

Section 2.4.1.13 Saline Water Supply Pump Station, page 2-17, lines 20-24

Saline Water Supply Pump Station

Supplying saline water to the SCH ponds to achieve the desired salinity would require pumping from the Salton Sea, which has a lower water surface than that of the SCH pond units. The pump station could be located on a platform in the Sea, which would require existing three-phase power to be brought out to the station. Pumps in a saline environment would have a limited life span because of the salinity. The pump station may have to be relocated farther out as the Sea recedes and as pumps need to be replaced for maintenance. Another option would be to excavate a channel to bring the seawater to a pump station located in the Sea closer to the Project site or on shore. This option would require less supply pipeline and a shorter run of utility lines, but would require that the channel be maintained over time and deepened as the Sea recedes. If the saline pump station were located closer to shore or onshore, the saline pipeline also could be located onshore within existing roads and/or adjacent to the ponds. Such an alignment would include running the saline pipeline from the pump station along Kornbloom Road, West Bowles Road, and an unnamed road; a segment of this pipeline also could be routed just west of Kornbloom Road along the edge of the pond site. It is important to note that as the Sea recedes, it gets progressively saltier. At some point in time seawater may not need to be used because of its hypersaline condition, and salinity may be achieved through a tailwater return system or similar process.

Section 2.4.1.15 Power Supply, page 2-17, lines 35-38

Electrical power would be needed to operate the pumps. Existing aboveground power lines operated by IID would be extended to reach the pumping plant located at the SCH ponds or in the Salton Sea; a three-phase, 480-volt aboveground system would be required at the SCH ponds while a three-phase, 480-volt underwater conduit system would be required to reach the pumping plant if it were located in the Salton Sea. At the New River, the supply line would be extended about 1.5 miles for the river pumps and about 0.5 to 1 mile for the Sea pumps. At the Alamo River, the supply line would be extended up to 1.5 miles for the river pumps and about 1 mile for the Sea pumps (Figure 2-5). Aboveground electrical power lines extended as a result of the SCH Project would be modified to prevent bird collisions and electrocutions (e.g., bird deterrents). Obtaining the power and connecting into the existing system would require coordination with IID, who would review and approve the final design, and determine the appropriate connection point for the three-phase power based on anticipated load.

SECTION 3.0
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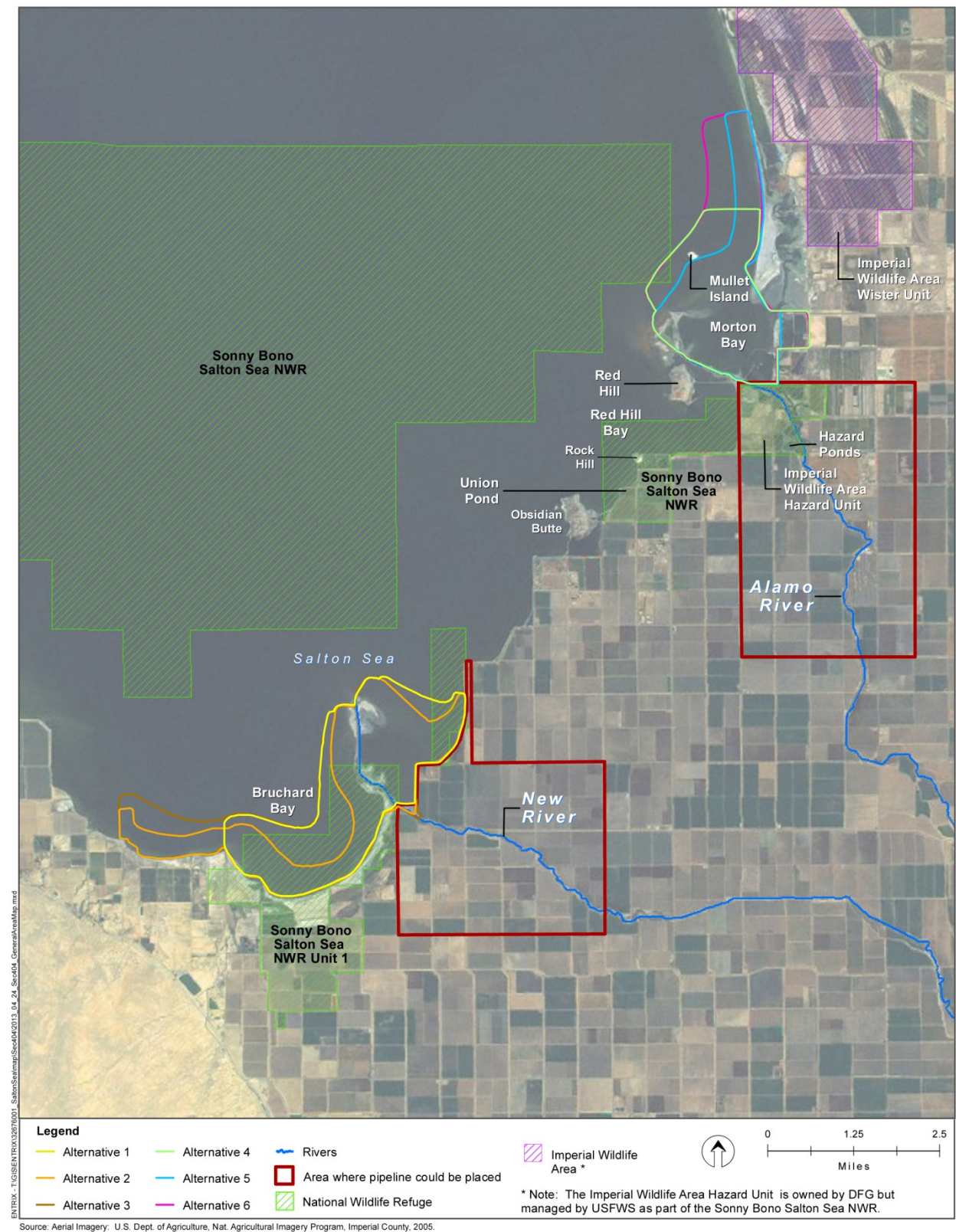


Figure 2-2 SCH Project Alternative Locations

Figure 2-5 Location of IID's Three-Phase Power Lines and Potential Project Extensions, page 2-18

The revised figure is on the following page.

Section 2.4.1.23 Land Acquisition, page 2-21, lines 23-27

The land where the SCH ponds would be located is owned by IID and would be leased from IID for the Project's duration, with the exception of the land at the Wister Beach SCH pond, which is owned by a number of private parties. Portions of the area listed on Figure 2-2 as "Sonny Bono Salton Sea NWR" are under BLM management authority and would require a right-of-way grant for use of BLM land to locate Project facilities on these parcels or to use them for access or construction materials. Other parcels in the Project area ~~Much of the land where the ponds would be located is~~ are owned by IID but already leased by IID to the ~~to~~ USFWS for the management of the Sonny Bono Salton Sea NWR. An agreement between DFG and USFWS, and the right-of-way grant from BLM would be established prior to construction of the SCH Project in order to ensure compatibility between NWR uses and the SCH Project. Other Project facilities, such as pump stations, pipelines, or access roads may be located on IID land, public right-of-way, or private land. Access roads would be needed for construction vehicles to move from the public right-of-way to the construction site. In the case of private land, easements would be obtained from willing landowners only. If an easement cannot be negotiated with a landowner, the proposed facilities would be located at another site. The easement would be structured so as to not preclude the continued use of the property by the landowner. The land in the easement would be disturbed during construction but then would be returned to the preexisting condition after construction, except at the sites of permanent facilities, such as pump stations, diversion works, and pipeline access manholes.

Section 2.4.1.24 Public Access, page 2-22, after line 7

The construction of a channel to bring saline water to a shore-based pump (Section 2.4.1.13) may require the construction of a launching ramp for the dredge and for long-term maintenance of the channel. In the future, this ramp potentially could be used as a public access boat ramp that would provide water access to the receding Sea.

Section 2.4.1.25 Project Compatibility with other Potential Future Land Uses, page 2-22, line 9

The SCH Project would be designed and operated to be compatible with other projects in the area. In the case of Federal lands, the proposed uses would be consistent with the management authority of the Federal agency that is assigned management responsibility of the parcel.



Figure 2-5 Location of IID's Three-Phase Power Lines and Potential Project Extensions

Section 2.4.2.9 Power Line Construction, page 2-25, lines 11-12

Three-phase power would be required to operate the river or saline pumps. In both instances, power would have to be extended from 1 to 2 miles from the current locations to supply the pumps (Figure 2-5). Extension of the power lines would occur using aboveground power lines and require the placement of power poles. The extension would be similar to what is currently found in the area. The required equipment includes an auger, small crane, and a power line machine. Obtaining Provision of the power and connecting into the existing system would require coordination with IID, who would review and approve the final design. Power lines for the saline pumps would be provided in underwater conduit. Aboveground electrical power lines extended as a result of the SCH Project would be modified to prevent bird collisions and electrocutions (e.g., bird deterrents).

Section 2.4.2.10 Interaction with Existing Facilities, page 2-25, line 23

In addition, according to the California Division of Oil, Gas, and Geothermal Resources' (DOGGR) database, 11 plugged and abandoned shallow temperature gradient geothermal wells are located in or near the area of the proposed SCH Project, which may require plugging to present standards if the wells are exposed or the present abandonment plugs are altered. Prior to construction, DOGGR records about the location of these wells would be reviewed, and any wells present in the construction area would be identified in the field and marked to avoid contact by construction activities. Additionally, DOGGR would be contacted to obtain information on the requirements for approval to perform any remedial operations on these wells.

Section 2.4.6 Maintenance and Emergency Repairs, page 2-27, line 16

The potential for biological fouling at pipes and pumps exists and would be addressed in maintenance plans. Typically, clogging of pipes would be reduced by periodic cleaning and flushing of the pipes. However, if the buildup of organisms in pipelines became excessive, pipe replacement may be required. Draining the ponds would not be a routine maintenance activity, but may be required if a berm were damaged or under another type of emergency situation. Monitoring as part of the adaptive management plan would identify any invasive plant species that colonized the ponds, and eradication or control methods would be implemented as needed.

Section 2.4.7 Best Management Practices, page 2-27, lines 25-26

Additionally, the Project would comply with the Imperial County Air Pollution Control District's Regulation VIII ~~rules~~ Rules 800-806 for dust control (general requirements, construction and earthmoving activities, bulk materials, open areas, and conservation management practices), carry-out and track-out, and paved and unpaved roads, which are required for all projects. This regulation is included in Appendix G. Additionally, during construction and maintenance, contractors and staff would implement the following measures to reduce emissions from fuel combustion and work activities:

Section 2.4.8 Decommissioning, page 2-28, line 10-11

The SCH Project would be designed to last until the end of the 75-year period covered by the QSA (2078) ~~for approximately 75 years~~. At the end of this period, or when funds ~~are~~ were no longer available to operate the Project, the SCH facilities would be decommissioned. Decommissioning would require breaching the berms and removing the pumping plants and diversion structures and filling in the sedimentation basin. The environmental impacts of such activities would be speculative because it is not known what conditions would be present that far in the future. Thus, they are not analyzed in this document, although they likely would be less than those that would

occur during the initial construction. Such activities would be subject to environmental review at the time they occurred.

Section 2.7 **Alternative 3 – New River, Pumped Diversion + Cascading Ponds, page 2-37, lines 13-14**

Saline Water Source. The saline pump would be located to the north of East New on a structure in the Salton Sea or near the shore. Water would be delivered to the saline pump through a channel excavated in the Sea bed or an intake pipeline and delivered to the SCH ponds ~~intakes~~ through a pressurized pipeline.

SECTION 3.1 AESTHETICS

Section 3.1.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds, page 3.1-10, lines 42-45

Impact AES-3: Other SCH facilities would be compatible with the existing character of the surrounding area (less-than-significant impact). Views from KOP B may include a trailer that would be present at the site for use by permanent employees. The trailer would be compatible with existing agricultural uses that predominate. The sedimentation basin that would be located near the New River would also be compatible with agricultural uses, and the brackish water pipeline corridor would be restored to its previous condition. The diversion structure would require the removal of a small amount of vegetation around the New River, but the disturbed area would be minor and would not be visible from sensitive viewpoints at the Sonny Bono NWR. The seawater pump station would be located on a platform in the Sea and may have to be relocated as the Sea recedes or it could be located onshore near the Sea. A pipeline would be required to bring seawater to the ponds, but it would be buried. Power to operate the seawater pumps would come from one or more short (approximately 0.5- to 1-mile--long) transmission line extensions (Figure 2-5). The segments within the SCH ponds and Salton Sea would be buried and thus would not cause an aesthetic impact. The routes along the north side of the New River and the east side of Bruchard Bay would be in areas where no power lines are currently present, although they are common throughout the region, while the third route would follow an existing power line for about half of its length. A pipeline would be required to bring seawater to the ponds. Such small-scale facilities would be visually compatible with surrounding agricultural uses. Therefore, impacts would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

SECTION 3.2 AGRICULTURAL RESOURCES

Section 3.2.3 Affected Environment, page 3.2-4, line 35

Imperial County covers an area of 4,597 square miles, or 2,942,080 acres. Approximately 20 percent of the land is irrigated for agricultural purposes, most notably the central area known as Imperial Valley. With over 500,000 acres of harvested commodities, agriculture remains one of the most valuable industries in Imperial County. Cattle are the county's top commodity, followed by head and leaf lettuce, wheat, and alfalfa. Other important crops include broccoli, carrots, onions, sugar beets, and spring mix (County of Imperial Agricultural Commissioner 2010). As shown in Table 3.19-4 in Section 3.19, Socioeconomics, the relative importance of individual crops may change over time, although cattle are consistently the top commodity.

Section 3.2.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds, page 3.2-9, line 22

Impact AG-2: Construction of the sedimentation basin would result in the permanent conversion of a small amount of Farmland to nonagricultural use (less-than-significant impact). The sedimentation basin would be located on Farmland adjacent to the New River, which would require the permanent loss of approximately 60 acres. This amount would be negligible when compared to the more than ~~5,0~~500,000 acres in production in Imperial County and well within the range of variability of the amount of agricultural land fallowed each year. The amount of land that was fallowed in the IID service area between 2002 and 2009 ranged from over 23,000 acres in 2002 to over 49,000 acres in 2007 (Table 3.2-4); the amount of fallowed land increased during this period due in part to water conservation measures required as a result of the Quantification Settlement Agreement, and it also fluctuates annually. Sixty acres represents only 0.0014 percent of the average acreage of land fallowed between 2004, when the IID fallowing program began, and 2009. It also is well under the annual variation in the amount of land that is fallowed (e.g., the amount of fallowed land increased by 1,761 acres between 2006 and 2007, whereas the acreage decreased by 6,198 between 2007 and 2008). This impact would be less than significant when compared to both the existing environmental setting and No Action Alternative given the small area affected in relation to the total area in production and the amount of land fallowed each year.

Section 3.2.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds, page 3.2-10, lines 4-9

Impact AG-3: Construction of the sedimentation basin potentially would result in the permanent conversion of Williamson Act contract land to nonagricultural use (significant impact). Depending on where the sedimentation basin is sited, the Project could permanently convert approximately 60 acres of Williamson Act land to nonagricultural use, which would require the payment of cancellation fees (personal communication, A. Havens 2011). The Williamson Act provides financial incentives to encourage the retention of agricultural land. As discussed under Impact AG-2, the conversion of 60 acres of agricultural land would negligible in relation to the amount of land that is currently farmed and fallowed in the Imperial Valley. However, the conversion of land under Williamson Act contracts prior to the nonrenewal termination date would conflict with this Act, which is intended to preserve agricultural land through financial incentives.~~would require the payment of cancellation fees (personal communication, A. Havens 2011).~~ This impact would be significant when compared to both the existing environmental setting and No Action Alternative.

SECTION 3.3 AIR QUALITY

Section 3.3.1 Introduction, page 3.3-1, lines 14-15

The study area includes the Salton Sea Air Basin (Basin). Imperial County Air Pollution Control District (ICAPCD) and South Coast Air Quality Management District (SCAQMD) have jurisdiction over the Basin's southern and northern portions, respectively. SCAQMD oversees the northern Basin's Riverside County and Coachella Valley portions. ICAPCD oversees the entire geographical area within Imperial County~~Calexico, Imperial County, and the Imperial Valley~~ in the southeastern Basin, which is where the Project would be located. Thus, the Project falls exclusively under ICAPCD's jurisdiction.

Section 3.3.2.2 Federal Regulations – General Conformity Rule, page 3.3-5, lines 19-20

As discussed in Section 3.3.4.5, Attainment Status Designations, Imperial County is designated moderate nonattainment for the Federal 8-hour O₃ NAAQS, while the Imperial Valley (which is the Salton Sea Air Basin's Imperial County portion) is designated as a serious nonattainment area for 24-hour Federal PM₁₀

and a nonattainment area for PM_{2.5}. The entire County is designated as a state nonattainment area for O₃ and PM₁₀.

Section 3.3.2.4 Source-Specific Regulations – Portable Equipment Registration Program (PERP), page 3.3-7, lines 33-38

The statewide PERP establishes a uniform program to regulate portable engines and portable engine-driven equipment units. Once registered in PERP, engines and equipment units may operate throughout the state of California without the need to obtain individual permits from local air districts, as long as the engine and/or equipment does not reside in the same location for more than 12 months. Owners or operators of portable engines and certain types of equipment can register their units under the PERP to operate their equipment anywhere in the state.

Although all permanently installed water pumps at the SCH Project would be electrically operated and not subject to ICAPCD's permits, the construction machinery at the SCH Project site with 50 horsepower or greater would be ~~The Project is not subject to ICAPCD's Authority to Construct requirements, because the Project would not include construction of any stationary air pollution sources that are subject to ICAPCD's review (all permanently installed water pumps would be electrically operated).~~

Section 3.3.3.5 Attainment Status Designations, page 3.3-16, line 10

Imperial County Attainment Status and Applicable Plans

Imperial County is designated as moderate nonattainment for the Federal 8-hour O₃ NAAQS. The Imperial Valley (which is the Imperial County portion of the Salton Sea Air Basin) is designated as Federal serious nonattainment area for PM₁₀ and nonattainment for PM_{2.5}. All areas of the County are designated as attainment for CO, NO₂, and SO₂ NAAQS. Imperial County is designated as nonattainment for O₃ and PM₁₀ CAAQS. The entire County is designated attainment or unclassified for PM_{2.5}, CO, NO₂, and SO₂ CAAQS. As part of the Ozone Attainment demonstration, a Reasonably Available Control Technology (RACT) demonstration was required. RACTs are emission control technologies that are economically and technically feasible. In compliance with this requirement, ICAPCD released the 2009 Reasonable Available Control Technology (RACT) State Implementation Plan (ICAPCD 2010a).

Section 3.3.3.5 Attainment Status Designations, page 3.3-17, lines 7-10

~~As part of USEPA's final ruling, a Reasonably Available Control Technology (RACT) demonstration was also required. RACTs are emission control technologies that are economically and technically feasible. In compliance with this requirement, ICAPCD released the 2009 Reasonable Available Control Technology (RACT) State Implementation Plan (ICAPCD 2010a).~~

Section 3.3.3.5 Attainment Status Designations, page 3.3-17, line 30

In August 2009, ICAPCD released the *2009 Imperial County State Implementation Plan for Particulate Matter Less than 10 Microns in Aerodynamic Diameter* (ICAPCD 2009). This document presents the SIP for PM₁₀ on ICAPCD's behalf, but the PM₁₀ SIP has yet to be approved by USEPA or CARB.

Section 3.3.4.5 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Mitigation Measures, page 3.3-34, lines 3-16

The SCH Project would be required to comply with ICAPCD's Regulation VIII, Fugitive Dust Control Measures (Appendix G); but In addition to those measures that are required for all projects by the ICAPCD (Section 7.1 Construction Equipment and Fugitive PM₁₀ Mitigation Measures of the ICAPCD's

CEQA Air Quality Handbook and the ICAPCD's Policy 5), the following ~~additional mitigation~~ measures would be implemented to further minimize impacts from NO_x and PM₁₀ emissions.

MM AQ-1: Implement fugitive PM₁₀ control measures. The following measures will be incorporated into the construction contract specifications in order to reduce PM₁₀ emissions from fugitive dust, ~~in addition to those measures that are required for all projects by the ICAPCD:~~

- Water exposed soil with adequate frequency to keep it continually moist for continued moist soil so that visible dust emissions would be limited to 20 percent opacity for dust emissions at all times (at least twice daily and as indicated by soil and air conditions).
- Replace ground cover in disturbed areas as quickly as possible.
- Limit vehicle speed for all construction vehicles to 15 miles per hour on any unpaved surface at the construction site.
- Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees.

MM AQ-2: Implement diesel control measures. The following measures will be incorporated into the construction contract specifications in order to reduce PM₁₀ and NO_x emissions from diesel engines, ~~in addition to those measures that are required for all projects by the ICAPCD:~~

- A schedule of low-emissions tune-ups will be developed and such tune-ups will be performed on all equipment, particularly for haul and delivery trucks.
- Low-sulfur (≤15 ppmw S) fuels will be used in all stationary and mobile equipment.
- Curtail construction during periods of high ambient pollutant concentrations as directed by the ICAPCD.
- Reschedule activities to reduce short-term impacts to the extent feasible.

Section 3.3.4.5 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Mitigation Measures, page 3.3-34 – 3.3-35, lines 39-40 and 1-2, respectively

The SCH Project, along with all other projects, would be required to comply with ICAPCD's Regulation VIII, Fugitive Dust Control Measures (Appendix G). In addition to those measures that are required for all projects by the ICAPCD (Section 7.1 Construction Equipment and Fugitive PM₁₀ Mitigation Measures of the ICAPCD's CEQA Air Quality Handbook and the ICAPCD's Policy 5), All projects would be required to comply with the ICAPCD's Regulation VIII, which is not mitigation per se, but which would minimize PM₁₀ emissions. MM AQ-1 and MM AQ-2 would be implemented by the SCH Project to reduce the Project's contribution to the significant cumulative impact from NO_x and PM₁₀ emissions, and other projects would be required to implement similar measures should their emissions exceed regulatory thresholds.

Section 3.3.5 General Conformity, page 3.3-39, lines 35-37

Under section 176(c)(1) of the Federal CAA, Federal agencies that “engage in, support in any way or provide financial assistance for, license or permit, or approve any activity”¹ must demonstrate that such actions do not interfere with state and local plans to bring an area into attainment with the NAAQS. Imperial County is designated moderate nonattainment for the Federal 8-hour ozone NAAQS, while the Imperial Valley (which is the Salton Sea Air Basin's Imperial County portion) is designated as a serious nonattainment area for 24-hour Federal PM₁₀ and a nonattainment area for PM_{2.5}. The program by which a Federal agency determines that its action would not obstruct or conflict with air quality attainment plans

¹ 42 USC section 7506(c)

is called "General Conformity." The implementing regulations for General Conformity are found in 40 CFR part 93, subpart B.²

Section 3.3.5 General Conformity, page 3.3-40, line 20

When describing the 2010 revisions to the definition of indirect emissions, USEPA offered the following explanation:

EPA is revising the definition for indirect emissions to clarify that only indirect emissions originating in a nonattainment or maintenance area need to be analyzed for conformity with the applicable SIP. In addition EPA is revising~~on~~ the definition of "indirect emissions" to clarify what is meant by "the agency can practically control" and "for which the agency has continuing program responsibility." This clarification represents EPA's long standing position that Congress did not intend for conformity to apply to "cases where although licensing or approving action is a required initial step for a subsequent activity that causes emissions, the agency has no control over that subsequent activity, either because there is no continuing program responsibility or ability to practically control."³

Section 3.3.5 General Conformity, page 3.3-43, lines 5-6

As a result of these USEPA findings and determinations, there is no specific attainment year for PM₁₀, only annual increments of 5 percent reductions (these reductions constitute the emissions budget). Ozone is ~~tentatively~~ in attainment with the 1997 8-hour ozone NAAQS, as ozone data up to 2010 have been validated by the USEPA, pending certification of 2008 monitoring data, until any future USEPA determination to the contrary. Thus, the year during which the total of direct and indirect emissions from the action is expected to be the greatest on an annual basis is the appropriate scenario for this analysis. This General Conformity determination is properly focused on emissions related to construction only, shown in Tables 3.3-16 and 3.3-17.

SECTION 3.4 BIOLOGICAL RESOURCES

Section 3.4.3.3 Wildlife – Common Bird Species, page 3.4-16, lines 35-37

The Basin provides important habitat for 48 species of gulls (40,000+ individuals), terns, and shorebirds. It is one of only five areas in the interior of western North America used by tens of thousands of birds in spring (Shuford et al. 2000). Some common aquatic bird species for which the Salton Sea provides important habitat include American avocet (*Recurvirostra americana*), American coot (*Fulica americana*), American wigeon (*Anas americana*), American white pelican (*Pelecanus erythrorhynchos*) (30 percent of North American breeding population), black-necked stilt (*Himantopus mexicanus*), California brown pelican (*Pelecanus occidentalis*), eared grebe (*Podiceps nigricollis*) (90 percent of North American population in some years), and ruddy duck (*Oxyura jamaicensis*) (50 percent of Pacific Flyway population) (USFWS 2010b; Shuford et al. 2000; Jehl 1994). Bird populations vary throughout the year as birds migrate to the Sea for breeding and as they stop over during migration to points north and south. The American avocet, American coot, American white pelican, ~~California brown pelican,~~ and ruddy duck are all found at the Salton Sea throughout the year. In some years, the California brown pelican is present throughout the year. The American wigeon and eared grebe are absent for a few months in the summer (USFWS 2010b).

² General conformity regulations were ~~recently~~ amended effective July 6, 2010. (75 FR 17254, (April 5, 2010))

³ 75 FR 17260 (April 5, 2010) (citations omitted)

Section 3.4.3.3 Wildlife – Common Bird Species, page 3.4-17, lines 26-29

The Caspian tern (*Hydroprogne caspia*) is a common breeding bird that occurs within the Salton Sea region from mid-April through October. It is most abundant at the Sea from late summer through fall. Most Caspian terns depart from the region by the end of October, but some remain through the winter (Patten et al. 2003). Caspian terns forage primarily or exclusively for fish but may occasionally take crayfish and insects (Cuthbert and Wires 1999). Approximately 25 percent of the North American population of the Caspian tern breeds at the Salton Sea (Cuthbert and Wires 1999; personal communication, K. Molina 2010). In 2009, the population size within the Project area was in the hundreds for the winter months and in the thousands for the breeding season (USFWS 2010b). In the past, Caspian terns nested on Mullet Island (Molina 2004). In 2010, nesting numbers of Caspian terns were up to several thousand 2,500 breeding pairs; ~~predominantly on Mullet Island and the D pond islands but also along Morton Bay's shore (personal communication, K. Molina 2010)~~ (Molina 2010).

Section 3.4.3.3 Wildlife – Common Bird Species, page 3.4-17, line 45

The laughing gull (*Leucophaeus atricilla*) was only observed at the Salton Sea in August during 2009 bird counts (USFWS 2010b), but was observed during summer 2010 surveys (Dudek 2010), and it is a fairly common summer and fall visitor. The Sea is the only area where the laughing gull occurs regularly in the western U.S. It has been observed nesting at Sonny Bono NWR after several decades of no breeding activity (Molina 2000; Molina 2004; Patten et al. 2003).

Section 3.4.3.3 Wildlife – Common Bird Species, page 3.4-18, line 9

Least terns (*Sternula antillarum*) at the Salton Sea may be either from coastal California or more likely from Mexico. It has not been recorded breeding at the Sea (Patten et al. 2003), but may breed due to recent observations of pairs. This species was not observed in the 2009 aquatic surveys (USFWS 2010b) or by Dudek in 2010. The least tern probably occurs at the Sea on an annual basis and has been observed at Sonny Bono NWR's Unit 1, Red Hill, IWA's Wister Unit, and at other locations farther away from the Project area. It occurs most often on mudflats and at the deltas of the New and Alamo rivers where it forages in fresh water in rivers or ponds (Patten et al. 2003).

Section 3.4.3.3 Wildlife – Rookeries, page 3.4-19, lines 18-21

A number of bird species occur at the Salton Sea as colonial nesting species specifically using rookeries including double-crested cormorant, great blue heron (*Ardea herodias*), and great (*Ardea alba*), snowy (*Egretta thula*), and cattle (*Bubulcus ibis*) egrets. During the 2010 focused surveys, rookeries of the double-crested cormorant and great blue heron were observed at the mouth of the Alamo and New rivers. The double-crested cormorant also breeds on Mullet Island in one of the largest North American colonies (Shuford et al. 2002). Great blue herons also are recorded within rookeries along the shoreline around IWA's Wister Unit and the New River delta (Shuford et al. 2000; Patten et al. 2003). The great blue heron does not form dense nesting colonies, but the species uses snags of partly submerged dead trees at the Salton Sea. Great egret nesting tends to be more colonial with sites concentrated along the shoreline at IWA's Wister Unit and Morton Bay around the delta of the New River (Molina and Sturm 2004; Patten et al. 2003). Similar to the great blue heron, the great egret nests in partially submerged snags. The snowy egret is similar to the great egret in nesting behavior and locations (Molina and Sturm 2004; Patten et al. 2003). At the Salton Sea, the cattle egret establishes massive rookeries (Molina and Sturm 2004; Patten et al. 2003), and during the 2010 surveys, hundreds to thousands of individuals were observed flying up and down the New and Alamo rivers (Dudek 2010). The rookeries for the cattle egret were only located along the Alamo River (Shuford et al. 2002; Dudek 2010).

Table 3.4-4 Special-Status Species Potentially Affected by the SCH Project

Common Name	Scientific Name	Status (Fed / State / CNPS)	Potential to be Present/Notes
Birds			
Gull-billed tern	<i>Gelochelidon nilotica</i>	- / SSC / - (nesting)*	<u>High</u> . Forages over many habitats including fresh and saline emergent wetlands, lakes, mudflats, croplands, grasslands, and, rarely, brushlands. Nests in small colonies on the ground in areas typically devoid of vegetation; may nest immediately adjacent to the shoreline on nearshore islets. Salton Sea is the only interior nesting site for gull-billed terns in western North America north of Mexico (Molina 2004). CNDDDB records from 1994 and 1998 near the mouths of the Whitewater and Alamo rivers. Observed during Summer 2010 surveys at Sonny Bono NWR and at the USGS ponds near the Alamo River (Dudek 2010). Between 1992 and 2001 approximately 72 to 155 breeding pairs were present. Currently in 2010, fewer than approximately 65 to 200-100 pairs attempted to breed <u>breeding pairs are</u> at the Salton Sea (personal communication, K. Molina 2010).
Black skimmer	<i>Rynchops niger</i>	- / SSC / (breeding)*	<u>High. Breeds</u> Has bred at the Sea's northern and southern ends with variable reproductive success (Shuford and Gardali 2008). Nest on the ground on sandy islands or sandy areas in salt marshes. Prefer islands with fine homogeneous substrates and no vegetation. The Salton Sea is the only interior nesting site for black skimmers in western North America north of Mexico (Molina 2004). Roosting takes place on sandy beaches or gravel bars. Rarely alights on water. Forage for fish by skimming the water surface. Observed during Summer 2010 surveys along the New and Alamo rivers and also nesting on the islands of Sonny Bono NWR (Dudek 2010).

Section 3.4.3.4 Special-Status Species – Terrestrial Species, pages 3.4-27 – 3.4-28, lines 45-46 and 11-13, respectively

Gull-Billed Tern. Gull-billed terns nest on protected spits, berms, and islands composed of sand or barnacle shells; at the Salton Sea, they also nest on ~~earthen levees~~ eroded or discontinuous levees that are isolated by water and on constructed islands in shallow brackish impoundments. For Salton Sea colonies, available nesting substrates include fine, poorly drained, clay soils devoid of all vegetation with cobbles and boulders located sparsely. Nests are often located adjacent to cobbles, boulders, or other debris. Gull-billed terns forage primarily in freshwater ponds and flooded agricultural fields. They are fairly common breeders at the Salton Sea, which is considered the breeding stronghold for this species in the western United States. Approximately 25 percent of the entire subspecies nests at the Salton Sea; approximately 80 percent of the U.S. population breeds at Salton Sea (Molina 2004). They arrive at the Salton Sea in mid-March and remain until October. Foraging habitat within the Project area would likely include agricultural fields, marshes, mudflats, drainage ditches, and fresh or saline open water. At the Salton Sea, the species forages for small fish, crayfish, lizards, butterflies, beetles, crickets, weevils, and occasionally, the young chicks of other birds. In 1999, 101 nesting attempts were recorded, 57 on the Sea's northern end near Johnson Street and 44 at Rock Hill on the southern shore (Shuford et al. 2000). ~~In 2009, gull-billed terns were observed between April and July within the Project region and were most abundant in July with almost 200 individuals recorded but not documented as nesting, predominantly at Morton Bay and Mullet Island (personal communication, K. Molina 2010).~~ In 2010, 87 pairs attempted to nest at five

locations sites, including Sonny Bono NWR's D pond islands and Unit 1 A4 ponds, USGS ponds near the Alamo River, and at Obsidian Butte and Obsidian Butte South, but were generally unsuccessful, likely due to predation (Molina 2010).

Section 3.4.3.4 Special-Status Species – Terrestrial Species, page 3.4-28, lines 44-49

Black Skimmer. Black skimmers are relatively recent arrivals to California and were first observed at the Salton Sea in 1968. They are now a fairly common breeder at the Sea with approximately 40 percent of the California breeding population (Ornithological Council 1988). The Sea is the only interior nesting site for black skimmers in western North America north of Mexico (Molina 2004). They seldom overwinter. They typically nest on sandy islands or sandy areas in salt marshes and they can also nest on isolated sections of eroded impoundment levees. Nesting habitat usually has little vegetative cover (<30 percent) with adequate protection from predators; areas with encroaching vegetation were rendered unsuitable for nesting. Shallow water near nest sites is required to soak their bellies to aid in cooling their eggs. Colonies choose areas where the chance of terrestrial predators is minimal. Black skimmers forage on small fish in calm, shallow waters around the Sea. From 1990 to 2000, the Salton Sea breeding population ranged between 80 and 487 pairs, with a mean of 360 pairs between 1992 and 2001. In 1999, 377 breeding pairs were recorded at Rock Hill at the Sea (Shuford et al. 2000). They also nest at the Sea near the Whitewater River delta, various locations on the southern shoreline, and near Salton City (Patten et al. 2003). In 2009, black skimmers were observed between May and October and were most abundant in August with approximately 150 individuals recorded near and within the Project area (USFWS 2010b). Near the Project area, this species has been recorded breeding at Sonny Bono NWR. Colonies usually include approximately 50-50 to 200 nests (Molina 1996). Suitable breeding areas within the Project area for this species include Mullet Island and sandbars if isolated from predators. They seldom overwinter.

Section 3.4.3.4 Special-Status Species – Terrestrial Species, page 3.4-29, lines 1-6

California Brown Pelican. The California brown pelican occurs at the Salton Sea as ~~newly fledged~~immatures ~~young~~ and post-breeding adults as they disperse from nesting areas in Baja California (Patten et al. 2003). During summer, brown pelicans forage around the Sea's margin. Since the mid-1990s, single day counts have reached 2,000 individuals (Shuford et al. 2000) and probably exceed 3,000 (Patten et al. 2003). Peak numbers of brown pelicans detected during surveys in 2005 and 2006 were over 5,000 birds (DWR and DFG 2007). In ~~recent years~~the past, brown pelicans have nested in small numbers, especially at the Sea's southern end at the mouth of the Alamo River (Molina and Sturm 2004). In 2009, California brown pelicans were most abundant in August with almost 3,000 individuals recorded near and within the Project area; numbers declined in the fall but the species remained a consistent visitor throughout the year (USFWS 2010b). This species was observed during summer 2010 surveys foraging within the Sea at the mouths of the New and Alamo rivers and along the shoreline (Dudek 2010); suitable roosting and loafing habitat includes sandbars, islands, and rocky areas within the Project area.

Section 3.4.4.3 No Action Alternative – Contaminants, page 3.4-32, lines 24-25

Selenium occurs in the Salton Sea's water and sediment, and has the potential to bioaccumulate and adversely affect fish and wildlife (DWR and DFG 2007), as discussed in Appendix I, Selenium Management Strategies. Aquatic and benthic invertebrates are a major route of food-chain transfer in the Salton Sea food chain (DWR and DFG 2007). The suggested toxicity threshold for invertebrates as prey (to avoid bioaccumulation in birds) is 3 to 4 µg/g dw (Hamilton 2004). However, selenium concentrations observed at the Salton Sea vary widely among locations and taxa and frequently exceed this threshold. Mean invertebrate selenium concentrations ranged from 2.37 to 6.64 µg/g dw at Salton Sea, 2.16 to 8.50 µg/g dw at the SHP complex. At the SHP complex, mean concentrations exceeded 4.0 µg/g dw in 67 to 80 percent of corixid samples and 0 to 30 percent of chironomid samples (Miles et al. 2009). In the IID

agricultural drains, selenium concentrations in chironomids ranged considerably higher (mean 6.5 µg/g dw, maximum 50.6 µg/g dw) (Saiki et al. 2010).

Fish currently exposed to selenium include tilapia, sailfin molly, western mosquitofish, and desert pupfish. Lemly (2002) recommended a threshold of 4 µg/g dw to avoid toxic effects in sensitive fish species. Selenium levels in fish currently exceed this threshold. Mean whole-body fish selenium concentrations were 10.4 µg/g dw in the open Salton Sea, 9.67 µg/g dw in the New River Estuary, 11.5 µg/g dw in the Alamo River Estuary (DWR and DFG 2007, Appendix F), 6.81 to 6.89 µg/g dw in IID agricultural drains (Saiki et al. 2010), and 2.8 to 4.7 µg/g dw in New River wetlands upstream (Johnson et al. 2009). USGS studies noted that sailfin mollies and moquitofish did not appear to be adversely affected at concentrations of 3.1 to 30.4 µg/g dw, and pupfish in laboratory experiments did not exhibit negative health effects from such levels of selenium exposure (Saiki et al. 2010).

Selenium's most substantial effects occur in bird embryos, such as increased risk of reduced hatching success and teratogenesis (embryo deformities) at higher concentrations. As such, selenium in the egg is the most sensitive measure for evaluating hazards for birds (Skorupa and Ohlendorf 1991, as cited in Ohlendorf and Heinz 2011). The responses to selenium vary among bird species, ranging from "sensitive" (e.g., mallard) to "average" (e.g., black-necked stilt) and "tolerant" (e.g., avocet) (Skorupa 1998, as cited in Ohlendorf and Heinz 2011). Cormorants and terns are likely to be fairly tolerant of selenium in keeping with greater tolerance of other saltwater-adapted species, such as avocets and snowy plover, compared to freshwater-adapted species, such as mallards (personal communication, H. Ohlendorf 2010). Risk of impaired reproduction can start to occur at egg concentrations of 6-12 micrograms per gram (µg/g) dry weight (dw). The risk of teratogenesis starts to occur above 12 µg/g dw for sensitive species and above 20 µg/g dw for moderately sensitive species (Ohlendorf and Heinz 2011).

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Desert Pupfish, page 3.4-35, lines 15-18

Because desert pupfish are or could be present in agricultural drains and in shallow water along the Sea's shoreline, construction activities for the ponds and saline diversion and diversion of the drain outflows around the Project area would result in habitat loss, alteration of adjacent habitat through turbidity from excavation of the Sea bed and pond areas and potential discharge of excavated sediments to the Sea, and mortality of some individuals. If construction activities occurred during the desert pupfish breeding season (approximately April through October), reproductive success for those mature pupfish in the Project footprint and at the sediment discharge location in the Sea could be greatly reduced. Since the species generally does not live more than 2 years, loss of reproduction for 1 year could have substantial effects on the population size at a specific location. Construction of the pump stations and channel or pipeline for bringing saline water from the Salton Sea to mix with the river water ~~for to achieve the desired salinity control~~ in the ponds would be both from a barge and the adjacent berm and would temporarily affect a small area of the Sea, primarily through underwater sound and turbidity. Few, if any, desert pupfish would be affected by this construction activity. As the Sea recedes, the ~~outer saline pump station and pipeline or intake channel~~ outer saline pump station and pipeline or intake channel would need to be moved or extended, requiring additional construction, or another one built, and the pipeline extension placed on or within the exposed seabed. By that time, salinity in the Sea would exceed the tolerance of desert pupfish, and construction would not affect them.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Desert Pupfish, page 3.4-36, line 8, line 14, and Bird Species, line 25

Operation of the pump stations to bring saline ~~Water-water~~ to the ponds has the potential to entrain desert pupfish until the Sea becomes too saline for their survival. The intake would be screened until that time, and maintenance activities to clean or to replace the screen could affect pupfish in the intake's immediate

vicinity. Maintenance of the pump stations could result in release of lubricants or other chemicals potentially toxic to pupfish. Due to the proposed location of the pump stations (adjacent to the outer berm and offshore from the ponds), few desert pupfish are likely to be affected by maintenance activities.

Maintenance activities for the ponds, such as excavation of materials for berm repair, also could affect desert pupfish that are present in the ponds. Turbidity effects, disturbance of feeding and spawning areas, and direct mortality could occur. Dropping the water level of one or more ponds for maintenance could strand desert pupfish resulting in mortality from desiccation or predation by birds. Under an emergency situation, draining one or more of the ponds for maintenance could occur and would strand desert pupfish resulting in mortality from desiccation or predation by birds.

Construction as well as operation and maintenance activities could affect special-status bird species that are present within the Project footprint through direct habitat disturbance, noise, and human presence. Individuals immediately adjacent to Project activities, including staging area(s) for construction of the ponds and gravity diversion, could also be affected by noise. Noise has been documented to adversely affect avian reproduction, and thus, construction noise and activity, if adjacent to areas occupied by nesting birds, could result in nesting failure if such activities occur during the breeding season.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Bird Species, page 3.4-39, line 4

Project construction would result in a temporary disturbance or alteration of shallow shoreline habitat (approximately 6.3 miles) where the ponds would be constructed compared to current conditions. Although gull-billed terns and black skimmers might forage along the shoreline, few would be expected to nest in this area because nesting is limited due to lack of predator protection along the shoreline. Construction noise and activity, if adjacent to areas occupied by gull-billed tern or black skimmer, would have a low potential to result in nesting failure if such activities occur during the breeding season (April through September).

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds –page 3.4-41, line 34

Impact BIO-1b: Project construction and operation would have minor effects on habitat and individuals of several special-status ~~bird and mammal~~ species (less-than-significant or no impact).

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds –page 3.4-41, lines 5-7

Western Snowy Plover. Conduct preconstruction (or pre-maintenance) focused surveys for western snowy plovers within suitable habitat that could be affected. Surveys will be conducted using current USFWS methods and/or methods approved by the DFG. If western snowy plovers are detected within the Project impact area, construction or maintenance activities will be conducted under a qualified biologist's supervision so that direct impacts are avoided. If breeding snowy plovers are detected within the Project impact area, construction or maintenance will be postponed and a protective buffer of at least 100 feet (as determined by a qualified biologist at the site) provided until it is confirmed that breeding is complete.

MM BIO-2: Prepare and implement a preconstruction/maintenance survey plan for bird species.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Birds, page 3.4-42, line 5

During operations, noise from the pumps that brings saline water to the ponds is unlikely to affect breeding because the pump stations would be located at the edge of the outer berm and offshore

(approximately 3,000 feet or more from the existing shoreline), or on the exposed seabed when the Sea recedes that far. Power to operate the saline water pumps would come from one or more short (0.7- to 1.0-mile-long) transmission line extensions (see Figure 2-5). The segments within the SCH ponds and Salton Sea would be buried. The routes along the north side of the New River and the east side of Bruchard Bay would be in areas where no power lines are currently present, while the third route would follow an existing power line for about half of its length. Special-status birds in the Project area are unlikely to collide with these short power lines due to their habitat use patterns. They tend to remain near the marshes or shoreline and/or they do not migrate in large flocks at night. The only species with a low potential for collision with a power line is the peregrine falcon while stooping (diving) to capture a bird lower than the power line. Given the small number of peregrine falcons in the Project area and bird deterrents included as part of the Project, no loss is expected. Impacts would be less than significant compared to the existing environmental setting and the No Action Alternative.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Birds,
page 3.4-42, line 44

Gull-Billed Tern and Black Skimmer. Compared to the No Action Alternative, Project construction would result in temporary disturbance or alteration of shallow shoreline habitat, but would maintain that shoreline as the Sea recedes, presumably providing a continuing food source within the ponds that would not otherwise exist under the No Action Alternative. Compared to current conditions, the Project would result in a temporary loss of foraging area and a very limited loss of potential nesting areas, and would equally replace foraging areas. Maintenance activities within the ponds could temporarily disturb foraging in the immediate vicinity of the work, but other foraging areas in the ponds would remain. Impacts would be less than significant compared to the existing environmental setting and the No Action Alternative.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Birds,
page 3.4-43, line 11

Mountain Plover, Lesser Sandhill Crane, and Greater Sandhill Crane. The mountain plover and lesser and greater sandhill cranes occur near the Project area as wintering species. They occur within plowed, barren, and burned agricultural fields and could occur within the Project area depending on placement of the diversion and conveyance pipeline. The mountain plover and lesser and greater sandhill cranes are nomadic and forage where suitable food is available. Their occurrence within the region and within the Project area is unpredictable. Due to their nomadic nature and flexibility for foraging, the foraging large area that is available to them, and their ability to avoid ~~disturbances~~ disturbances, these species are unlikely to be affected by Project construction and operation (including maintenance). Therefore, impacts would be less than significant. Assuming suitable foraging habitat would be available, Project effects on these species would be similar under the No Action Alternative and existing conditions.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds –
3.4-47, lines 7-8

Impact BIO-5a: Project construction, and operation, and maintenance could affect nesting by some common bird species and introduction of invasive species (significant impact).

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds –
3.4-48, lines 13-16 and add after line 16

Impact BIO-5b: Project construction and operation would have minor effects on common fish (native and nonnative), wildlife species, and native plant communities (less-than-significant or no impact). No common upland native plant communities are present in the Alternative 1 area, and no impacts would occur from Project construction or operation.

Some aquatic organisms would be entrained with the water diverted from the New River and end up in the sedimentation basin and ultimately in the SCH ponds. Since they are freshwater species, many would survive in the sedimentation basin, but none are expected to survive in the ponds, which would typically be managed at salinities above 20 ppt. River flow downstream of the diversion would be reduced by less than 50 percent (see Section 3.11), which would also reduce the amount (volume) of aquatic habitat and its structure (e.g., depth). Loss of some individuals of or habitat for nonnative aquatic species would not adversely affect their populations in the New River, and impacts would be less than significant.

A reduction in river flow would have minimal effects on existing riparian vegetation along the river banks downstream of the diversion location because more than 50 percent of the river flow would remain, and groundwater levels that help support this vegetation would remain high due to the river flow, adjacent agricultural field irrigation, and infiltration from the adjacent SCH ponds. Thus, riparian habitat value for common birds would not be reduced due to the SCH Project, and impacts would be less than significant.

The river delta and associated estuary will move seaward with or without the Project as the Sea recedes. The Project-related reduced river inflow would decrease the size of the estuary (mixing zone), but increases in the salinity of the Sea will also affect mixing by increasing the density gradient between the inflowing river water and Sea water, irrespective of the Project. Development of riparian vegetation along the margins of the extending river (across the exposed Seabed and moving delta) will occur over time and may or may not become as dense and large in stature as that currently at the river delta. A number of factors unrelated to the Project, in addition to amount of river water, would affect this vegetation growth. Thus, habitat value for common birds along the extending river and its delta will likely be lower than at the current delta with and without the Project. Impacts of the Project would be less than significant.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – page 3.4-49, line 14

Operation of the pump stations to bring saline water to the ponds would not disrupt breeding of common birds that nest within the Project area because the pump stations would be located adjacent to the seaward side of the outer berm and in the Sea away from any nesting habitat, including the islands within the ponds. Maintenance activities have the potential to disturb bird foraging throughout the Project. Effects on foraging, however, would be less than significant because maintenance would occur in only a portion of the ponds at a time leaving other foraging areas available nearby within the Project area. Transmission lines to bring power to the pump stations would have less-than-significant impacts on birds as described in Impact BIO-1b.

Section 3.4.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds – Effects of Contaminants, page 3.4-49, lines 31-33

Contaminants in the water and sediment, such as selenium and pesticides, could impact biota utilizing the SCH ponds. Breeding species that could be exposed to selenium by feeding at the SCH ponds include gull-billed tern, California brown pelican, double-crested cormorant, Caspian tern, black skimmer, black-necked stilt, American avocet, and western snowy plover. Ecorisk modeling was used to estimate potential selenium concentrations in water and biota for different Project alternatives and operations (model scenarios of river water blended with Salton Sea water to achieve 20 ppt or 35 ppt salinity in ponds) (Sickman et al. 2011; see Appendix I). For Alternative 1, estimated fish tissue selenium concentrations would be 4.3-5.5 µg/g dw in ponds operated at salinities of 20 to 35 ppt, which exceeds a protective standard of 4.0 µg/g dw (Lemly 2002) but is similar to or less than existing levels at the Salton Sea and rivers (DFG and DWR 2007, Johnson et al. 2009, Saiki et al. 2010). Bird egg selenium concentrations would be 6.0- to 8.3 µg/g dw in ponds operated at salinities of 20 to 35 ppt, and less than 6 µg/g dw for ponds operated at 40 ppt or greater. This egg selenium concentration exceeds the conservative toxicity threshold (>6.0 µg/g dw), which would increase the probability of reduced hatching

success in some species, but would not reach levels associated with teratogenesis ($>12 \mu\text{g/g dw}$) (Ohlendorf and Heinz 2011).

Section 3.4.4.5 Alternative 2 – New River, Pumped Diversion – page 3.4-54, lines 1-2

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts on these species would be the same as described for Alternative 1; impacts would be less than significant.

Section 3.4.4.5 Alternative 2 – New River, Pumped Diversion – page 3.4-54, line 3

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts on these species would be the same as described for Alternative 1; impacts would be less than significant. Transmission lines to bring power to the pump stations would have less-than-significant impacts on special-status birds as described for Alternative 1.

Section 3.4.4.5 Alternative 2 – New River, Pumped Diversion – page 3.4-55, lines 26-27

Effects of diversion entrainment, reduced river flows downstream of the diversion, ~~and~~ water quality fluctuations in the SCH ponds, and temporary disturbances of adjacent habitats in the Sea on aquatic biota and temporary construction disturbances of shallow shoreline and terrestrial habitat on birds and terrestrial wildlife would be the same as described under Alternative 1, and impacts would be less than significant when compared to the existing environmental setting and the No Action Alternative.

Section 3.4.4.6 Alternative 3 – New River, Pumped Diversion + Cascading Ponds – page 3.4-58, lines 16-17

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts on these species would be the same as described for Alternative 1; impacts would be less than significant.

Section 3.4.4.6 Alternative 3 – New River, Pumped Diversion + Cascading Ponds – page 3.4-58, line 18

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts on these species would be the same as described for Alternative 1; impacts would be less than significant. Transmission lines to bring power to the pump stations would have less-than-significant impacts on special-status birds as described for Alternative 1.

Section 3.4.4.6 Alternative 3 – New River, Pumped Diversion + Cascading Ponds – page 3.4-59, lines 37-38

Effects of diversion entrainment, reduced river flows downstream of the diversion, ~~and~~ water quality fluctuations in the SCH ponds, and temporary disturbances of adjacent habitats in the Sea on aquatic biota and temporary construction disturbances of shallow shoreline and terrestrial habitat on birds and terrestrial wildlife would be the same as described under Alternative 1, and impacts would be less than significant when compared to the existing environmental setting and the No Action Alternative.

Section 3.4.4.7 Alternative 4 – Alamo River, Gravity Diversion + Cascading Ponds – page 3.4-62, lines 14-15

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts of construction, operation, and maintenance on these species would be the same as described for Alternative 1; impacts would be less than significant.

Section 3.4.4.7 Alternative 4 – Alamo River, Gravity Diversion + Cascading Ponds – page 3.4-62, line 17

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts of construction, operation, and maintenance on these species would be the same as described for Alternative 1; impacts would be less than significant. Power to operate the saline water pumps would come from a short (approximately 1-mile-long) transmission line extension (see Figure 2-5). The segment within the SCH ponds and Salton Sea would be buried. The above-ground route follows an existing power line. Special-status birds in the Project area are unlikely to collide with this short power line as described for Alternative 1.

Section 3.4.4.7 Alternative 4 – Alamo River, Gravity Diversion + Cascading Ponds –page 3.4-64, lines 1-13

Effects of diversion entrainment, reduced river flow downstream of the diversion, ~~and~~ water quality fluctuations in the SCH ponds, and temporary disturbance of adjacent habitats in the Sea on aquatic biota would be the same as described under Alternative 1, except that the effects would be at the Alamo River, and impacts would be less than significant. Project effects on shallow shoreline habitat and common terrestrial wildlife would be less than significant as described for Alternative 1. Operation of the pump station (including the power line) and sedimentation basin would have effects similar to those described for Alternative 1, except the sedimentation basin would be 37 acres (23 acres less than for Alternative 1).

Effects of selenium uptake, pesticides, and avian diseases on common bird species would be essentially the same as described for Alternative 1, although the risk of selenium uptake would be slightly higher due to the higher selenium concentration in Alamo River water than in New River water. Ecorisk modeling was used to predict potential selenium concentrations in water and biota for different Project alternatives and operations (river water blended with Salton Sea water to achieve 20 ppt or 35 ppt salinity in ponds) (Sickman et al. 2011; ~~see~~ Appendix I). For Alternative 4, predicted fish tissue selenium concentrations would be 5.9- to 8.5 µg/g dw in ponds operated at salinities of 20 to 35 ppt, which exceeds a protective standard of 4.0 µg/g dw (Lemly 2002) but is similar to existing levels at the Salton Sea and rivers (DFG and DWR 2007, Saiki et al. 2010). Bird egg selenium concentrations would be 8.9 µg/g dw for ponds operated at 35 ppt, and 12.7 µg/g dw for ponds operated at 20 ppt. This amount exceeds the conservative toxicity threshold (>6.0 µg/g dw), which would increase the probability of reduced hatching success in some sensitive species, and approaches levels associated with teratogenesis in sensitive species (>12 µg/g dw). However, overall impacts on breeding birds using the SCH ponds would be less than significant for the reasons described under Alternative 1.

Section 3.4.4.8 Alternative 5 – Alamo River, Pumped Diversion – page 3.4-66, lines 33-34

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts on these species would be the same as described for Alternative 4; impacts would be less than significant.

Section 3.4.4.8 Alternative 5 – Alamo River, Pumped Diversion – page 3.4-66, add after line 35

The transmission line to bring power to the pump stations would have less-than-significant impacts on special-status birds as described for Alternative 1.

Section 3.4.4.8 Alternative 5 – Alamo River, Pumped Diversion – page 3.4-68, lines 11-14

Effects of diversion entrainment, reduced river flow downstream of the diversion, ~~and~~ water quality fluctuations in the SCH ponds, and temporary disturbance of adjacent habitats in the Sea on aquatic biota would be the same as described under Alternative 1, except that the effects would be at the Alamo River, and impacts would be less than significant. Operation of the pump stations (including the power lines) and sedimentation basin would have effects similar to those described for Alternative 1, except the sedimentation basin would be 30 acres (half of that for Alternative 1).

Section 3.4.4.9 Alternative 6 – Alamo River, Pumped Diversion + Cascading Ponds – page 3.4-70, lines 31-32

Mountain Plover, Lesser Sandhill Crane, Greater Sandhill Crane, American Peregrine Falcon, Bald Eagle, Wood Stork, Large-Billed Savannah Sparrow, Western Yellow Bat, and American Badger. Impacts on these species would be the same as described for Alternative 4; impacts would be less than significant.

Section 3.4.4.9 Alternative 6 – Alamo River, Pumped Diversion + Cascading Ponds – page 3.4-70, add after line 33

The transmission line to bring power to the pump stations would have less-than-significant impacts on special-status birds as described for Alternative 1.

Section 3.4.4.9 Alternative 6 – Alamo River, Pumped Diversion + Cascading Ponds – page 3.4-72, lines 11-14

Effects of diversion entrainment, reduced river flow downstream of the diversion, ~~and~~ water quality fluctuations in the SCH ponds, and temporary disturbance of adjacent habitats in the Sea on aquatic biota would be the same as described under Alternative 1, except that the effects would be at the Alamo River, and impacts would be less than significant. Operation of the pump stations (including the power lines) and sedimentation basin would have effects similar to those described for Alternative 1, except the sedimentation basin would be 50 acres (10 less than for Alternative 1).

SECTION 3.8 GEOLOGY, SOILS, AND MINERALS

Section 3.8.3.7 Mineral Resources, page 3.8-11, lines 39-40

Since the geothermal brines of the Salton Sea Known Geothermal Resource Area have a greater concentration of valuable minerals, this area's resource is being developed. ~~Cal Energy is operating a zinc extract plant near the Salton Sea.~~ Some of the minerals being extracted from geothermal brines, such as manganese and tin, have strategic value for national defense (County of Imperial 2006).

SECTION 3.9 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

Section 3.9.4.2 Thresholds of Significance, page 3.9-11, added after line 19

As discussed in Section 3.9.2.1, the CEQ has determined that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO₂-equivalent GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. For long-term actions that have annual direct emissions of less than 25,000 metric tons of CO₂-equivalent emissions, CEQ encourages Federal agencies to consider whether the action's long-term emissions should receive similar analysis. CEQ does not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHGs. Based on Tables 3.9-3 through 3.9-6, the direct and indirect emissions of CO₂-equivalents during construction and operations would be well below 25,000 metric tons per year. Based on the low emissions, no further analysis is warranted under NEPA. The following significance thresholds and impact analysis are for CEQA purposes.

Section 3.9.4.2 Thresholds of Significance – Application of Significance Criteria, page 3.9-12, lines 7-11

- **Generate GHG emissions that may have a significant impact on the environment** – The Project alternatives would directly and indirectly generate GHG emissions from construction and operational activities. Direct GHG emissions would be generated through fuel consumption, fuel combustion resulting from construction activities, emissions from the transportation of goods and other materials to the sites, and workers traveling in vehicles to and from the sites during both construction and operation. The Project also would indirectly result in GHG emissions, primarily from the generation of electric power used by the ~~freshwater~~ brackish water pumps required for Alternatives 2, 3, 5, and 6, and the seawater pumps required for all alternatives; additionally, a negligible amount of power would be required at the trailer that would serve as office space for the permanent employees. GHG emissions of each alternative are analyzed, and the potential for these emissions to have a significant impact on the environment ~~is based on is compared with existing environmental conditions and regulations. factors such as:~~
 - Relative amounts of GHG emissions, taking into consideration whether the amount of emissions is small compared to the 25,000 metric tonne CO₂e reporting threshold for AB 32 and 7,000 metric tonne CO₂e threshold of significance suggested by CARB draft guidance in 2008.
 - Potential to contribute to a lower carbon future and energy efficiency.

Section 3.9.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds, page 3.9-12, lines 38-39

As shown in Table 3.9-3, construction would generate approximately 5,800 metric tonnes of CO₂e over the course of 2 years (approximately 2,900 metric tonnes of CO₂e per year). These emissions would be temporary and would cease upon completion of work. The annual construction emissions would be well under the annual 25,000 metric tonne CO₂e reporting threshold established by AB 32. The emissions also would be well under the draft annual 7,000 metric tonne CO₂e threshold suggested by CARB. To provide additional perspective, if the 5,796 metric tonnes of total construction emissions were amortized over the approximately 64-year Project duration, they would be approximately 45 metric tonnes of CO₂e per year. Moreover, they would be well under the amount of GHG emissions that major facilities are required to report emissions (25,000 metric tons of carbon dioxide equivalents (CO₂e) or more per year).

Section 3.9.4.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds, page 3.9-15, lines 1-19

The Project has been designed to be energy-efficient to the extent feasible. Minimal power would be required at the trailer that would serve as office space for the permanent employees.

The primary power demand during operations would result from pumping, and electric pumps were chosen over diesel to minimize air emissions. ~~Minimal power would be required at the trailer that would serve as office space for the permanent employees.~~ During operation, the pumps required to move water from the river and Salton Sea to the ponds would ~~utilize~~ use an average of 975 motor horsepower and consume about 6,925 MW-hr of electric power annually. Thus, indirect GHG emissions from the fossil fuel component of mixed electric power generation would increase as a result of the Project. Indirect GHG emissions from electric power used by the pumping plants would be about 2,280 metric tonnes CO₂e annually (CCAR 2009). As noted in Section 3.9.2.2, the State of California has imposed a number of regulations requiring the reduction of GHG emissions and the increased use of renewable energy sources. Power to supply the Project would be provided by IID, which is adding more renewable energy sources into its resource mix in order to meet regulatory requirements (IID 2010). Thus, power required to operate the Project pumps would increasingly come from sources that minimized the production of GHG emissions, and indirect emissions would be expected to decrease over time.

In addition to indirect ~~generation~~ emissions, direct GHG emissions from maintenance equipment and vehicles would be about 96 metric tonnes of CO₂e annually. Combined direct and average indirect operational emissions would be about 2,380 metric tonnes of CO₂e annually, which is well under the annual 25,000 metric tonne CO₂e reporting threshold established by AB 32 and the draft annual 7,000 metric tonne CO₂e threshold suggested by CARB.

~~Due to its small scale and requirements imposed on power sources by the State of California, the Project's impacts on the environment as a result of the GHG emissions generated during construction and operations would be less than significant when compared to both the existing environmental setting and the No Action Alternative. Moreover, the SCH Project would comply with the best management practices outlined in Section 2, which would reduce the amount of GHGs generated by the Project. Additionally, as indicated on page 3.9-15, the Project would comply with best management practices that are intended to reduce GHG emissions during construction, operations, and maintenance to the extent feasible. (Refer to Section 2.4.7 for a description of these practices.)~~ Using these best management practices would contribute to energy efficiency.

Using the mandatory reporting threshold of 25,000 metric tonnes of CO₂e established by CARB and the 7,000 metric ton significance threshold suggested in the draft staff proposal to the CARB as guides as to the level of emissions that might be considered significant, and looking at specific characteristics of the Project as described in Section 3.9.4.2, the lead agencies have determined that this impact would be less than significant when compared to both the existing environmental conditions and the No Action Alternative.

SECTION 3.11 HYDROLOGY AND WATER QUALITY

Section 3.11.2.1 Water Rights, page 3.11-3, line 12

Individuals and agencies in the Salton Sea Basin hold seven individual water rights permits for diversion from Salton Sea tributaries. Imperial Irrigation District (IID) has water rights on the Colorado River for delivery of water through the All American Canal. Metropolitan Water District of Southern California has submitted a water right application to divert agricultural return flows from the New and Alamo rivers. The return flows are a result of the application of Colorado River water to irrigated lands in IID's service area. The New River water right application seeks 700 cfs up to a maximum of 433,400 afy. The Alamo

River water right application is for a diversion of 800 cubic feet per second (cfs) up to 475,000 acre-feet per year (afy). To date, Metropolitan Water District of Southern California has not prepared the required environmental document for these water rights permits and so the California State Water Resources Control Board (SWRCB) has not acted upon these permits. In addition, IID has asserted that it has the right to the use of all agricultural return flows within their service area, which is the majority of flows in the New and Alamo rivers. Therefore, the SCH Project must obtain IID's consent to use these return flows.

Section 3.11.2.2 Salton Sea and Agricultural Drainage, page 3.11-3, added after line 20

The Salton Sea receives runoff from several small tributaries, in addition to the Whitewater, New, and Alamo rivers. Flows from the three rivers are largely the result of agricultural return flows. The application of irrigation water introduces salts to the land, which are leached through the soil and collected in subsurface drains located 4 to 6 feet below the surface. This water is then conveyed to surface drains connected directly to the Salton Sea, or to the New or Alamo rivers and then to the Sea.

The California Legislature in 1968 passed Assembly Bill 461 that reserves the Salton Sea for collection of agricultural drainage flows, seepage, and other flows. In December 2000, as part of the Torres Martinez Desert Cahuilla Indians Claims Settlement, the Salton Sea was declared a permanent flowage easement for IID and the Coachella Valley Water District (Pub. L. 106-568, 114 Stat. 2906. See 25 U.S.C. § 1778 a(6); 1778e(a),(b)).

Section 3.11.2.5 Surface Water Hydrology – Salton Sea, page 3.11-7, lines 8-10

The Salton Sea is a terminal water body that receives water from the New, Alamo, and Whitewater rivers, along with numerous small streams, precipitation, and groundwater. The only outflow from the Sea is through evaporation and seepage. Formed in 1905–1907 from Colorado River flood flows, the Salton Sea is supported primarily by agricultural return flows. These return flows have decreased in recent time; ~~largely~~ because of several factors, including a reduction in water orders from farmers during the last 10 years and reduced flows from Mexico. Lower precipitation also has contributed to the decline in flows in the New and Alamo rivers. ~~water transfers from the Imperial Valley and the resulting water conservation measures.~~ Recent Salton Sea elevations show the elevation peak around May 1995 and a decreasing trend to the end of the 2010 water year (Figure 3.11-2). Inflow to the Sea from the Imperial Valley is projected to continue to decline from the current annual average of 1,029,620 afy to 723,940 afy (with adjustment for the Quantification Settlement Agreement [QSA]) by 2020 (DWR and DFG 2007). The combined inflow from the Imperial Valley and Mexico to the Salton Sea represents about 86.3 percent of the total inflow to the Sea. The Coachella Valley accounts for 8.5 percent of the total inflow to the Sea. The total salt loading to the Sea from these sources is 92.6 and 5.8 percent, respectively (DWR and DFG 2007). The relative magnitude of the annual flow to the Sea from the three major tributaries is shown on Figure 3.11-3.

Section 3.11.2.5 Surface Water Hydrology – Alamo River, page 3.11-11, line 2

The Alamo River ~~also originates in the Mexicali Valley~~ at the south side of the All American Canal on the eastern boundary of Calexico and flows north to the Salton Sea. Runoff from the Chocolate Mountains to the southeast contributes to the Alamo River through numerous watercourses that eventually are picked up in agricultural drains within IID's service area. Along its course, the river picks up stormwater, municipal wastewater, and agricultural return flows. During dry periods, the river flow is composed almost entirely of agricultural return flow (drainwater). The elevation of this basin is primarily at or below sea level, with a mean annual precipitation less than 2 inches near the Salton Sea.

Section 3.11.2.5 Surface Water Hydrology – Agricultural Drains/Natural Watercourses, page 3.11-11, line 30

IID is the agricultural water purveyor in the Imperial Valley, providing water from the Colorado River through the All American Canal. IID receives and delivers about 90 percent of the 3.2 million afy of irrigation water delivered from the Colorado River (Lawrence Livermore National Laboratory [LLNL] 2008). IID also provides a network of drainage channels that receive water from on-farm subsurface drainage systems (Figure 3.11-6). This drainage water is then conveyed to the New River, Alamo River, or directly to the Salton Sea. Agricultural drainage from the Imperial Valley directly to the Sea comprises about 10 percent of total Imperial Valley contribution to the Sea's inflow, which is estimated at 93,848 afy (DWR and DFG 2007).

Section 3.11.2.6 Surface Water Quality, page 3.11-13, line 19

Sediment

Sediment loading to the Salton Sea comes from the New, Alamo, and Whitewater rivers, numerous natural watercourses that flow into the Sea, and also the individual drains and canals that directly enter the Sea. Total suspended solids, a measure of the sediment load, has been measured in both the New and Alamo rivers. These data indicate that the average total suspended solids for the New River is 217 milligrams per liter (mg/L) and 261 mg/L for the Alamo River. Assuming an average annual flow for the New River of 612,845 cfs and 612,845 cfs for Alamo River, then the annual sediment loading to the Sea is 132,000 and 232,600 tons/year for the New and Alamo rivers, respectively.

Section 3.11.2.6 Surface Water Quality – Phosphorus, page 3.11-18, lines 35-37

In the rivers during 2004-2010, average levels of soluble orthophosphates were 75 percent greater in the New River compared to the Alamo River (536 µg/L and 306 µg/L, respectively) (Table 3.11-5) (C. Holdren, Reclamation, unpublished data). Similar to the Salton Sea, during the summer months levels of soluble orthophosphates and total phosphorus were lowest. Total phosphorus concentrations are highest during the fall months at the New River and during the winter months at the Alamo River. Average annual concentrations of total phosphorus were approximately 56 percent greater in the New River compared to the Alamo River (976 µg/L and 624 µg/L, respectively) (C. Holdren, Reclamation, unpublished data). ~~Nutrient concentrations have not decreased recently, despite TMDLs for total suspended solids and phosphorus or changes in agricultural practices (personal communication, C. Holdren Reclamation, 2010).~~

Section 3.11.3.3 No Action Alternative, page 3.11-36, lines 11-17

As water use within IID decreases due to increased conservation and water transfers, the flow in the New and Alamo rivers would be expected to decrease by approximately 305,670 afy, which would result in a declining water surface elevation in the Sea and an increasing salinity because of the concentrating effect of evaporation. Simulations in the PEIR (DWR and DFG 2007) showed water surface elevations declining and salt levels increasing under the No Action Alternative (CEQA Baseline, Figure 3.11-9, and Figure 3.11-10) until 2046 when the surface elevation stabilizes at about -258.3 ~~-247.8~~ feet msl. The PEIR also looked at the baseline condition that considered a larger decrease in inflow to the Sea (referred to as the Variability Conditions Inflow baseline). That simulation showed the Sea declining to -258.3 in 2046 (also shown on Figure 3.11-9 and Figure 3.11-10). The stabilized elevation would be about 6 feet lower than the 1925 elevation that the Salton Sea had declined to before rising in response to increased agricultural runoff. The simulations conducted for the PEIR suggest the current trend and show a remnant Salton Sea that would become a brine sink with salinity exceeding 100 ppt by 2030~~2024~~ and approximately 243 ppt by 2046 (DWR and DFG 2007).

Figure 3.11-9 Simulated Salton Sea Elevation under the No Action Alternative, page 3.11-37

The revised figure follows.

Figure 3.11-10 Simulated Salton Sea Salinity under the No Action Alternative, page 3.11-38

The revised figure follows.

Section 3.11.3.4 Alternative 1 – New River, Gravity Diversion + Cascading Ponds, page 3.11-39, lines 17-33

From the initial Project operation in 2014 through the end of the proof-of-concept period in 2025, a total of approximately 223,770 af of water would be lost to evaporation from the SCH ponds. This loss would be partially offset by the decrease in evaporation from the Sea because the storage (and therefore the surface area of the Sea) would be less because of the SCH diversion. By 2025, the volume of water stored in the Sea would be reduced by about 118,100 ~~130,200~~ af compared to the No Action Alternative. The Sea's surface elevation would be about 0.68 foot lower because of the ongoing evaporation that would result from Project operations.

By 2077, the Sea's depth (water surface elevation minus the ~~bottom-lowest~~ elevation of the Sea) would be reduced by 2.44 ~~3~~ percent, and its water surface elevation would be about 0.79 foot lower as a result of the SCH diversions. Table 3.11-10 compares the Salton Sea's water surface elevation, storage volume, and surface area that would occur in the absence of the Project with the Project at the onset of operations, the end of the proof-of-concept period, and the end of the Project's lifetime.

The SCH ponds would cover playa exposed under the No Action Alternative and by 2077, although Alternative 1 results in a smaller remnant Sea, the net effect of the alternative is to cover an additional 482 ~~940~~ acres of playa.

Alternative 1 also would result in a change to the Salton Sea's water surface elevation when compared to existing conditions. Most of the change, however, would be a consequence of the changes in inflow to the Sea described above, and not related to the Project. Table 3.11-10 shows the changes from the existing conditions that occur under the No Action Alternative and a small increment associated with the Project. For example, by 2077 the water surface elevation of the Sea is expected to decline by 13.6 ~~27.2~~ feet relative to existing conditions. While this is substantial change in elevation, all but 0.79 feet of the change would a result of the No Action Alternative. That is, the Sea will get smaller, shallower, and saltier regardless of whether the SCH Project is implemented or not, which expected to result in the collapse of the ecosystem. Alternative 1 would offset a portion of this lost habitat by providing new habitat that is usable by birds, fish, and other organisms. It would not, in itself, result in changes that would have an adverse effect on or preclude the beneficial uses of the Salton Sea identified in the Basin Plan. Impacts from the change in water surface elevation in the Salton Sea would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

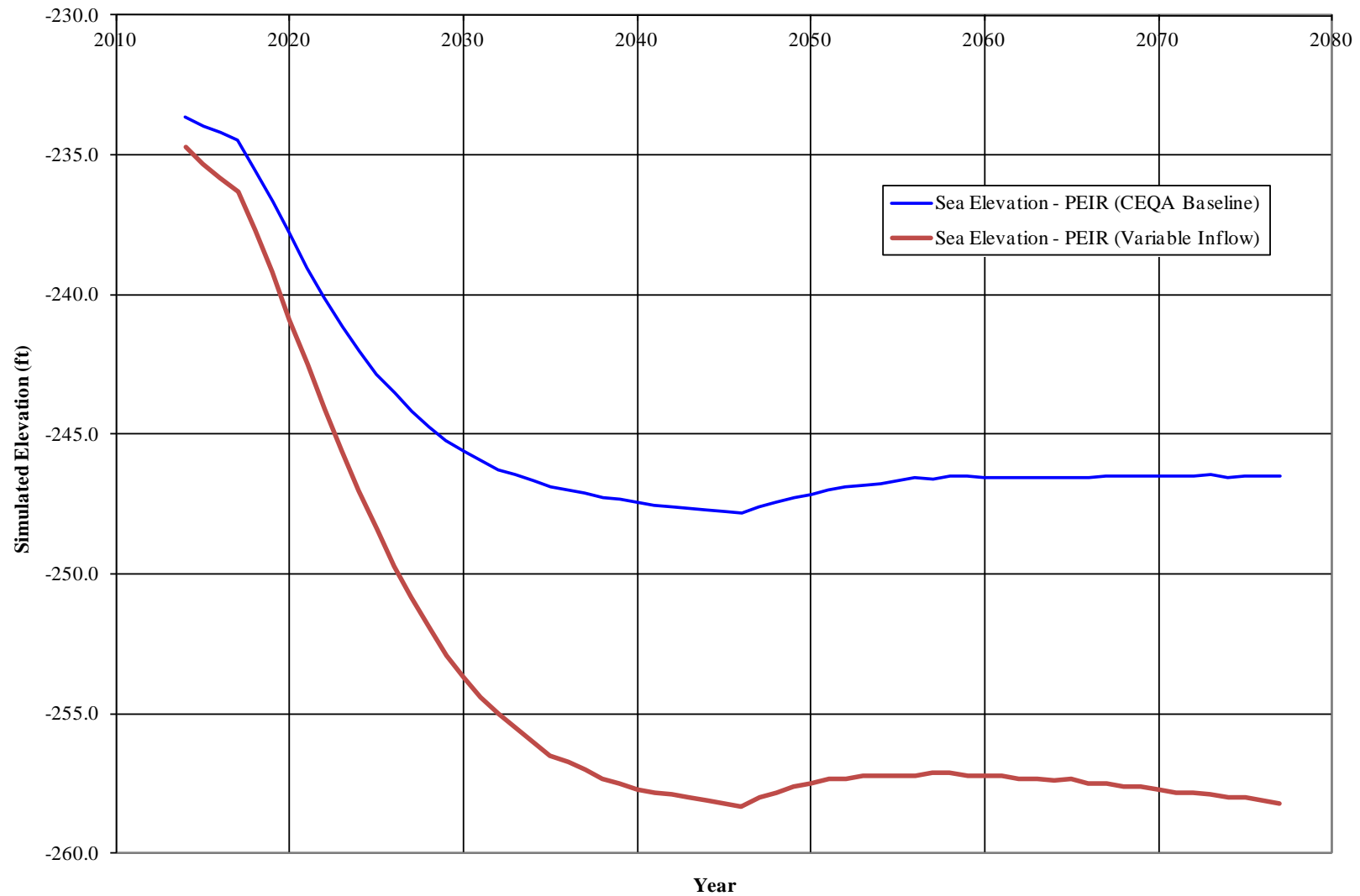


Figure 3.11-9 Simulated Salton Sea Elevation under the No Action Alternative

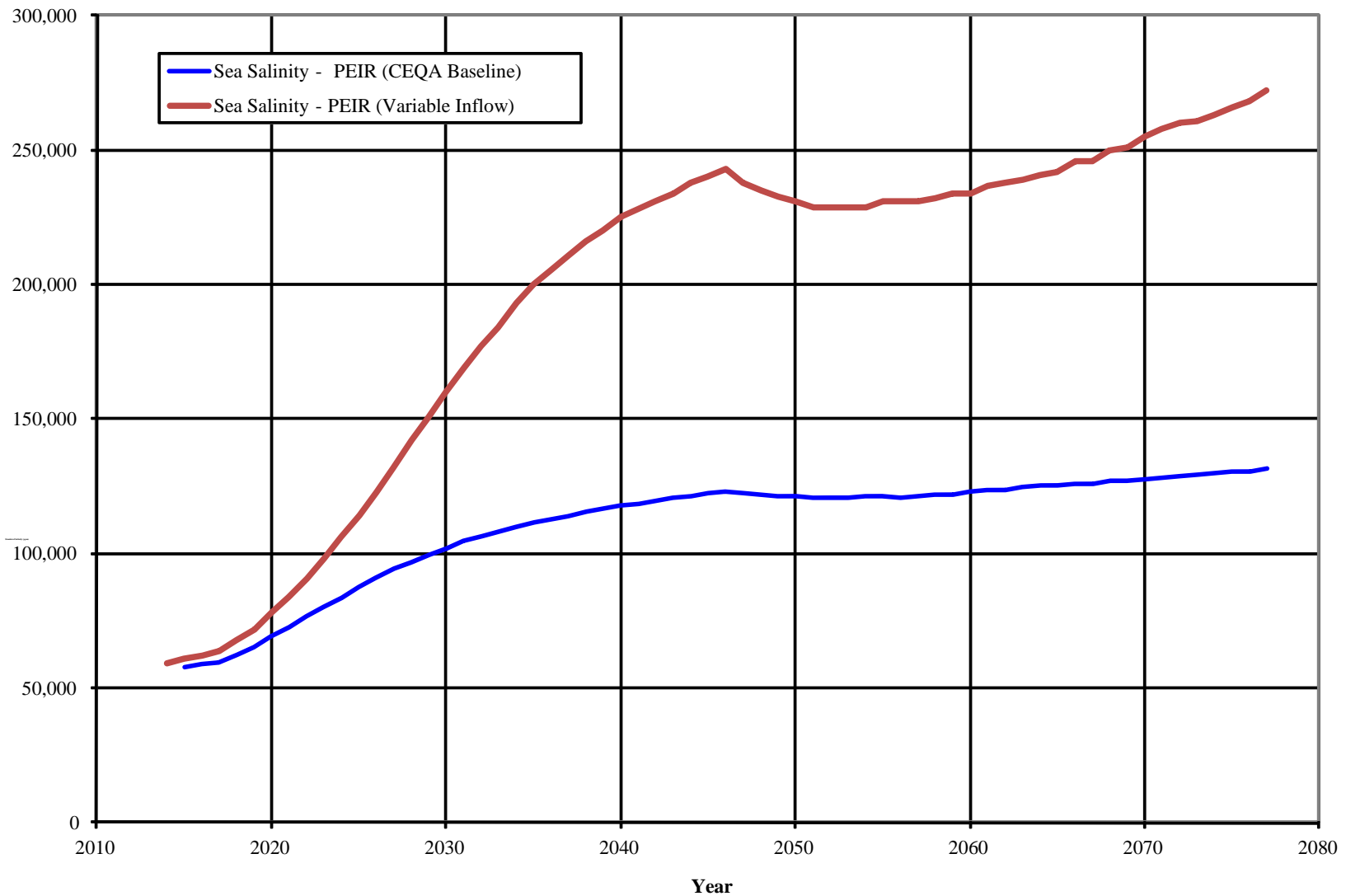


Figure 3.11-10 Simulated Salton Sea Salinity under the No Action Alternative

Table 3.11-10 Salton Sea Surface Elevation and Area – No Action¹ and SCH Project Alternatives, page 3.11-40

This table replaces Table 3.11-10 in the Draft EIS/EIR.

Table 3.11-10 Salton Sea Surface Elevation and Area – No Action¹ and SCH Project Alternatives									
	Elevation			Storage			Area		
	2014 (ft)	2025 (ft)	2077 (ft)	2014 (af)	2025 (af)	2077 (af)	2014 (acres)	2025 (acres)	2077 (acres)
Existing ²	-231.0	--	--	6,744,357	--	--	227,299	--	--
No Action	-233.6	-242.8	-246.5	6,116,192	4,182,992	3,511,895	222,649	190,029	176,102
Alternative 1	-233.6	-243.5	-247.2	6,116,192	4,064,941	3,380,848	222,649	187,576	173,450
Difference	0.0	-0.6	-0.7	0	-118,052	-131,047	0	-2,454	-2,652
Alternative 2	-233.6	-243.4	-247.1	6,116,192	4,082,584	3,400,305	222,649	187,942	173,844
Difference	0.0	-0.5	-0.6	0	-100,408	-111,590	0	-2,087	-2,258
Alternative 3	-233.6	-243.6	-247.4	6,116,192	4,040,851	3,354,251	222,649	187,075	172,912
Difference	0.0	-0.8	-0.9	0	-142,141	-157,644	0	-2,954	-3,190
Alternative 4	-233.6	-243.3	-247.0	6,116,192	4,096,702	3,415,859	222,649	188,235	174,159
Difference	0.0	-0.5	-0.5	0	-86,290	-96,036	0	-1,794	-1,942
Alternative 5	-233.6	-243.3	-247.0	6,116,192	4,104,749	3,424,719	222,649	188,402	174,340
Difference	0.0	-0.4	-0.5	0	-78,243	-87,176	0	-1,627	-1,762
Alternative 6	-233.6	-243.4	-247.2	6,116,192	4,072,214	3,388,871	222,649	187,727	173,612
Difference	0.0	-0.6	-0.7	0	-110,778	-123,024	0	-2,303	-2,490
Notes:									
1. No Action modeled in PEIR, Appendix H-2, Attachment 2, Table H2-2-3 (DWR and DFG 2007).									
2. Existing Conditions is represented by 2010 conditions.									

Table 3.11-11 Salton Sea Salinity – No Action and SCH Project, page 3.11-41

This table replaces Table 3.11-11 in the Draft EIS/EIR.

Table 3.11-11 Salton Sea Salinity – No Action and SCH Project Alternatives			
	2014 (ppt)	2025 (ppt)	2077 (ppt)
Existing ¹	51.0	--	--
No Action	57.0	87.5	131.6
Alternative 1	57.0	90.0	136.7
Percent Change	0.0%	2.9%	3.9%
Alternative 2	57.0	89.6	135.9

Table 3.11-11 Salton Sea Salinity – No Action and SCH Project Alternatives			
	2014 (ppt)	2025 (ppt)	2077 (ppt)
Percent Change	0.0%	2.5%	3.3%
Alternative 3	57.0	90.6	137.8
Percent Change	0.0%	3.5%	4.7%
Alternative 4	57.0	89.3	135.3
Percent Change	0.0%	2.1%	2.8%
Alternative 5	57.0	89.2	134.9
Percent Change	0.0%	1.9%	2.5%
Alternative 6	57.0	89.9	136.3
Percent Change	0.0%	2.7%	3.6%
¹ Existing Conditions is represented by 2010 conditions.			

Section 3.11.3.5 Alternative 2 – New River, Pumped Diversion, page 3.11-44, lines 25-38

From the initial Project operation in 2014 through the end of the proof-of-concept period in 2025, a total of approximately 190,350 af of water would be lost to evaporation from the SCH ponds. This loss would be partially offset by the decrease in evaporation from the Sea because the storage (and therefore the surface area of the Sea) would be less because of the SCH diversion. By 2025, the volume of water stored in the Sea would be reduced by about 1040,4700 af compared to the No Action Alternative. The Sea's surface elevation would be about 0.56 foot lower because of the ongoing evaporation that would result from Project operations.

By 2077, the Sea's depth would be reduced by 2.43.7 percent, and its water surface elevation would be about 0.67 foot lower as a result of the SCH diversions (Table 3.11-10).

The SCH ponds would cover playa exposed under the No Action Alternative and by 2077 although Alternative 2 results in a smaller remnant Sea, the net effect of the alternative is to cover an additional 408790 acres of playa.

Impact HYD-2: Project implementation would increase the Salton Sea's salinity (less-than-significant impact). The discussion under Alternative 1 is generally applicable to this alternative. Although the total salt load of the Sea would not change as a result of the Project, the volume of water in the Sea would be reduced because of the increased rate of evaporation in the SCH ponds (refer to Impact HYD-1). Therefore, for a 2,670 acre pond, the Sea's salinity would increase relative to No Action by 2.53.6 percent (to 89.6418.4 ppt) by 2025 and by 3.36.7 percent (to 135.9290.4 ppt) by 2077 (Table 3.11-11). This impact would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

Section 3.11.3.6 Alternative 3 – New River, Pumped Diversion + Cascading Ponds, page 3.11-45, lines 17-30

From the initial Project operation in 2014 through the end of the proof-of-concept period in 2025, a total of approximately 269,460 af of water would be lost to evaporation from the SCH ponds. This loss would be partially offset by the decrease in evaporation from the Sea because the storage (and therefore the surface area of the Sea) would be less because of the SCH diversion. By 2025, the volume of water stored

in the Sea would be reduced by about 142,100~~156,700~~ af compared to the No Action Alternative. The Sea's surface elevation would be about 0.89 feet lower because of the ongoing evaporation that would result from Project operations.

By 2077, the Sea's depth would be reduced by 2.45~~4~~ percent, and its water surface elevation would be about 0.94~~1.0~~ foot lower as a result of the SCH diversions (Table 3.11-10).

The SCH ponds would cover playa exposed under the No Action Alternative and by 2077 although Alternative 3 results in a smaller remnant Sea, the net effect of the alternative is to cover an additional 584~~150~~ acres of playa.

Impact HYD-2: Project implementation would increase the Salton Sea's salinity (less-than-significant impact). The discussion under Alternative 1 is generally applicable to this alternative. Although the total salt load of the Sea would not change as a result of the Project, the volume of water in the Sea would be reduced because of the increased rate of evaporation in the SCH ponds (refer to Impact HYD-1). Therefore, for a 3,770-acre pond, the Sea's salinity would increase relative to No Action by 3.55~~2~~ percent (to 90.64~~19.9~~ ppt) by 2025 and by 4.79~~5~~ percent (to 137.82~~97.9~~ ppt) by 2077 (Table 3.11-11). This impact would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

Section 3.11.3.7 Alternative 4 – Alamo River, Gravity Diversion + Cascading Pond, page 3.11-46, lines 11-24

From the initial Project operation in 2014 through the end of the proof-of-concept period in 2025, a total of approximately 163,650 af of water would be lost to evaporation from the SCH ponds. This loss would be partially offset by the decrease in evaporation from the Sea because the storage (and therefore the surface area of the Sea) would be less because of the SCH diversion. By 2025, the volume of water stored in the Sea would be reduced by about 96,000~~124,260~~ af compared to the No Action Alternative. The Sea's surface elevation would be about 0.57 foot lower because of the ongoing evaporation that would result from Project operations.

By 2077, the Sea's depth would be reduced by 2.44~~4~~ percent, and its water surface elevation would be about 0.58 foot lower as a result of the SCH diversions (Table 3.11-10).

The SCH ponds would cover playa exposed under the No Action Alternative and by 2077 although Alternative 4 results in a smaller remnant Sea, the net effect of the alternative is to cover an additional 350~~194~~ acres of playa.

Impact HYD-2: Project implementation would increase the Salton Sea's salinity (less-than-significant impact). The discussion under Alternative 1 is generally applicable to this alternative. Although the total salt load of the Sea would not change as a result of the Project, the volume of water in the Sea would be reduced because of the increased rate of evaporation in the SCH ponds (refer to Impact HYD-1). Therefore, for a 2,290 acre pond, the Sea's salinity would increase relative to No Action by 2.14~~4~~ percent (to 89.34~~18.6~~ ppt) by 2025 and by 2.87~~5~~ percent (to 135.32~~92.4~~ ppt) by 2077 (Table 3.11-11). This impact would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

Section 3.11.3.8 Alternative 5 – Alamo River, Pumped Diversion, page 3.11-47, lines 14-27

From the initial Project operation in 2014 through the end of the proof-of-concept period in 2025, a total of approximately 148,440 af of water would be lost to evaporation from the SCH ponds. This loss would be partially offset by the decrease in evaporation from the Sea because the storage (and therefore the surface area of the Sea) would be less because of the SCH diversion. By 2025, the volume of water stored in the Sea would be reduced by about 78,200~~86,300~~ af compared to the No Action Alternative. The Sea's

surface elevation would be about 0.45 foot lower because of the ongoing evaporation that would result from Project operations.

By 2077, the Sea's depth would be reduced by 2.49 percent, and its water surface elevation would be about 0.56 foot lower as a result of the SCH diversions (Table 3.11-10).

The SCH ponds would cover playa exposed under the No Action Alternative and by 2077 although Alternative 5 results in a smaller remnant Sea, the net effect of the alternative is to cover an additional 317600 acres of playa.

Impact HYD-2: Project implementation would increase the Salton Sea's salinity (less-than-significant impact). The discussion under Alternative 1 is generally applicable to this alternative. Although the total salt load of the Sea would not change as a result of the Project, the volume of water in the Sea would be reduced because of the increased rate of evaporation in the SCH ponds (refer to Impact HYD-1). Therefore, for a 2,080-acre pond, the Sea's salinity would increase relative to No Action by 1.92.8 percent (to 89.2417.5 ppt) by 2025 and by 2.55.1 percent (to 134.9286.0 ppt) by 2077 (Table 3.11-11). This impact would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

Section 3.11.3.9 Alternative 6 – Alamo River, Pumped Diversion + Cascading Ponds, page 3.11-48, lines 11-23

From the initial Project operation in 2014 through the end of the proof-of-concept period in 2025, a total of approximately 209,990 af of water would be lost to evaporation from the SCH ponds. This loss would be partially offset by the decrease in evaporation from the Sea because the storage (and therefore the surface area of the Sea) would be less because of the SCH diversion. By 2025, the volume of water stored in the Sea would be reduced by about 110,800122,143 af. The Sea's surface elevation would be about 0.67 foot lower because of the ongoing evaporation that would result from Project operations.

By 2077, the Sea's depth would be reduced by 2.44.0 percent, and its water surface elevation would be about 0.78 feet lower as a result of the SCH diversions (Table 3.11-10).

The SCH ponds would cover playa exposed under the No Action Alternative and by 2077 although Alternative 6 results in a smaller remnant Sea, the net effect of the alternative is to cover an additional 451880 acres of playa.

Impact HYD-2: Project implementation would increase the Salton Sea's salinity (less-than-significant impact). The discussion under Alternative 1 is generally applicable to this alternative. Although the total salt load of the Sea would not change as a result of the Project, the volume of water in the Sea would be reduced because of the increased rate of evaporation in the SCH ponds (refer to Impact HYD-1). Therefore, for a 2,940-acre pond, the Sea's salinity would increase relative to No Action by 2.74.0 percent (to 89.9418.5 ppt) by 2025 and by 3.67.4 percent (to 136.3292.0 ppt) by 2077 (Table 3.11-11). This impact would be less than significant when compared to both the existing environmental setting and the No Action Alternative.

SECTION 3.13 LAND USE

Section 3.13.2.1 State Programs and Regulations, page 3.13-1, lines 18-20

The California State Lands Commission (SLC) manages State-owned lands that underlie California's navigable and tidal waterways. The State holds these lands, known as "sovereign lands," for the benefit of all the people of the state, subject to the Public Trust for water-related commerce, navigation, fisheries, recreation, open space and other recognized Public Trust uses." The SLC has determined that one-two parcels included in the potential SCH Project sites are within its jurisdiction (Figure 1-2). Parcel (010-020-030), ~~shown on Figure 1-2~~ is included as part of Alternatives 4 and 6 and would be subject to a lease

for the use of sovereign lands. Additionally, a portion of Alternatives 4, 5, and 6 is within Parcel 020-010-040, and its use could require a mineral lease from the SLC if any soils were removed from this parcel as part of the SCH Project.

Section 3.13.3.5 Future Land Uses in the Study Area – Geothermal Energy Production,
page 3.13-9, line 29

As noted above, the proposed pond sites are located in an area that contains important geothermal resources, and IID has granted mineral rights to various geothermal companies that would allow them to develop geothermal facilities in this area (subject to the appropriate environmental compliance and approval processes) (personal communication, B. Wilcox 2010). Future geothermal power plants may be located in areas that are currently submerged by the Salton Sea. Future facilities on land owned by IID could include one 10-acre well pad in each quarter section in unspecified locations within the Project's boundaries, pipelines to convey geothermal water, roads that can support heavy loads, and electric transmission lines. The 10-acre wells pads could include multiple well heads with directional boring under the surrounding SCH Project areas. Pipelines, roads, and electric transmission lines may require easements up to 600 feet wide for construction, access, and maintenance. Geothermal power generation plants typically require sites up to 50 acres. At this time, it is not known whether such facilities would be constructed and where they would be located. Their siting, construction, and operation would require permits and independent environmental analysis.

Section 3.13.4.3 No Action Alternative, page 3.13-11, line 30

Declining water levels will also expose Salton Sea shoreline areas as playa; this exposed land area will become available for potential future economic development. This land would likely be designated for specific land uses by the appropriate land use agency, such as Imperial County, for residential, commercial, industrial, or open space development, and future development would be required to be consistent with the requirements of the agency with jurisdiction over the land. Extensive geothermal resources exist in the vicinity of the New and Alamo rivers. These areas are planned for geothermal production and are expected to be developed with pads to locate drilling and well facilities. Additionally, IID plans to construct experimental air quality management plots in the Project vicinity. The No Action Alternative would not restore habitat along the existing shoreline or convert exposed playa to open water, and would not, therefore, have the potential to conflict with future planned land uses for the exposed playa areas.

Figure 3.13-3 Existing Land Uses near the New and Alamo Rivers, page 13-7-7.

The revised figure is on the following page.

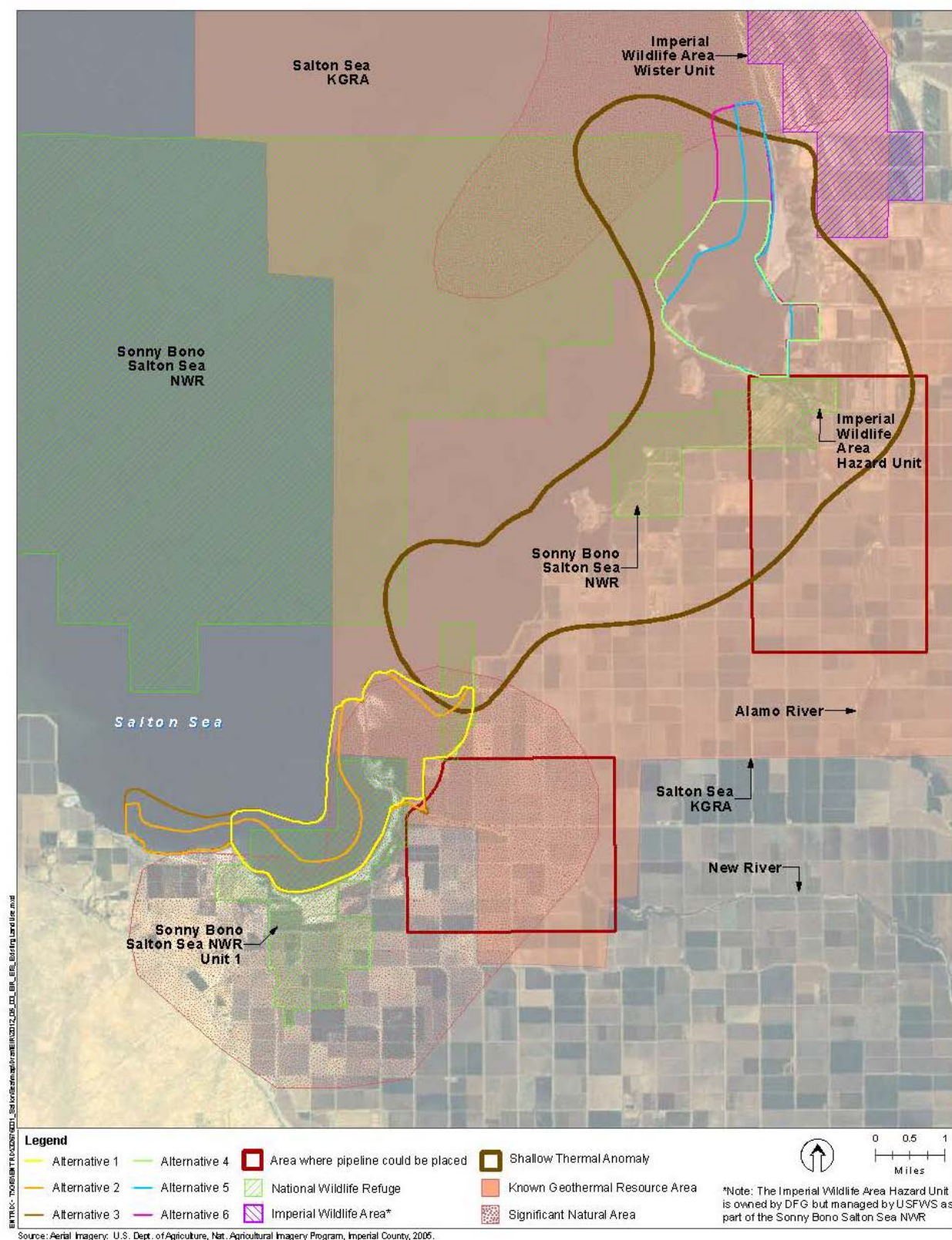


Figure 3.13-3 Existing Land Uses near the New and Alamo Rivers

SECTION 3.19 SOCIOECONOMICS

Section 3.19.3.3 No Action Alternative, page 3.19-7, lines 22-30

As the Salton Sea recedes, there is a potential that farmers could reclaim the exposed land for agricultural uses, but the likelihood of this occurring is speculative. The land near the river deltas would be composed primarily of sand, silt, and fine particles and would be suitable for agriculture, but it would require reclamation, as well as the provision of irrigation water by the Imperial Irrigation District. Reclamation would involve leaching the salts out of the soils through the application of water, and in some areas the ground would need to be 6 to 7 feet higher than any standing or running water in the area. Groundwater intrusion could also be an issue, requiring a good drainage system to prevent the upward movement of salty water (personal communication, K. Bali 2010). Some areas along the western shoreline of the Salton Sea contain more well-drained soils than the river delta areas and could be reclaimed as farmland without the installation of tile lines, thus eliminating or reducing the need for ground surfaces to be 6 to 7 feet higher than any standing or running water in the area. Additionally, the Imperial Irrigation District and local farmers are currently investigating the potential for reclamation of these soils without excessive leeching (with repeated deep tillage of the soil to promote aeration). Most of these areas are well to the west of the Project alternatives, but some reclaimed areas may be identified within the river deltas. ~~Water also would need to be made available by the Imperial Irrigation District for irrigation (personal communication, K. Bali 2010).~~ Thus ~~Therefore,~~ there is a potential for exposed, ~~the likelihood of this land to being reclaimed in the future is possible,~~ but it is considered speculative at this time (personal communication, D. Vargas 2011).

SECTION 4.0 CUMULATIVE IMPACTS

Section 4.3.6 Energy Consumption, page 4-18, line 44

The geographic scope for the energy consumption cumulative impact analysis is Imperial County. Construction, operation, and maintenance of the projects discussed above would result in the consumption of energy, including electricity, natural gas, diesel fuel, and gasoline, but would not necessarily result in the inefficient, wasteful, or unnecessary consumption of energy. Several of the projects discussed above would result in the generation of electrical energy and cumulative impacts would be less than significant. SCH Project operation would require the use of ~~diesel~~ electrically powered pumps to deliver saline water from the Salton Sea to the SCH ponds. Over time, the efficiency of the saline pump may decrease under long-term pumping; however, a comparatively minor amount of energy would be required, and the SCH Project's contribution to the cumulative impact would not be considerable and is therefore, less than significant.

SECTION 6.0 COMPLIANCE, CONSULTATION, AND COORDINATION

Section 6.1.2.4 California State Lands Commission Public Trust Doctrine, page 6-9, lines 36-38

The SLC has determined that parcel 020-010-030, which falls within the boundaries of Alternatives 4 and 6 (Figure 1-2), is within its jurisdiction and would require a lease that would be subject to findings of consistency with the Public Trust Doctrine and the Public Trust Policy administered by the SLC. ~~The proposed uses for the SCH Project fall within the definition of uses consistent with the Public Trust Doctrine and Policy.~~ Additionally, a portion of Alternatives 4, 5, and 6 is within Parcel 020-010-040 (Figure 1-2), and its use could require a mineral lease from the SLC if any soils were removed from this parcel as part of the SCH Project. All decisions on lease issuance and Public Trust consistency of leases and proposed uses of sovereign lands would be made only by the three-member panel of Commissioners.

Section 7.3 Environmentally Preferable/Environmentally Superior Alternative, page 7-2, line 12

The Council on Environmental Quality's National Environmental Protection Act Guidelines, section 1505.2(b) requires that, in cases where an EIS has been prepared, the Record of Decision (ROD) must identify all alternatives that were considered, ". . . specifying the alternative or alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in National Environmental Protection Act section 101. Ordinarily, this designation means the alternative that causes the least damage to the biological and physical environment; the designation also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. Additionally, the United States Environmental Protection Agency's section 404(b)(1) Guidelines require the Corps to issue a permit only for the "least environmentally damaging practicable alternative," which is the most practicable alternative that would result in the least damage to aquatic resources and is not contrary to the public interest. Therefore, the "least environmentally damaging practicable alternative" will be the Corps' preferred alternative. California Environmental Quality Act Guidelines section 15126.6 also requires the identification of the environmentally superior alternative; if the No Action Alternative is considered environmentally superior, then an environmentally superior alternative must be chosen from one of the Project alternatives.

APPENDIX D PROJECT OPERATIONS

Section D.2.6 Agricultural Drain Interception Ditch, page D-5, added after paragraph 1

Water from adjacent agricultural drains that currently flows (or is pumped) directly into the Salton Sea would be rerouted around the SCH ponds. The interception ditch would allow for the continuation connection of these drains to the Salton Sea and not disturb the flow of agricultural drainwater from the adjacent fields. IID would maintain operational control of ~~these~~ the interception ditch and agricultural drains and continue to provide all maintenance activities necessary on these drains, subject to the requirements of IID's Habitat Conservation Plan and related permits and authorizations.

Section D.3.1 Habitat Requirements and Operational Constraints, page D-5, second bulleted list

SCH pond operations would attempt to meet Project goals and objectives given certain constraints of physical conditions, water quality, and climate. The general characteristics of the aquatic habitat that would likely be present for fish include:

- Highly eutrophic, shallow-water ponds that would be highly turbid in spring through fall.
- Low temperatures below 50 degrees Fahrenheit (°F) (10 degrees ~~Celsius~~ Celsius [°C]) during short periods (hours) of the winter and high temperatures in the low- to mid-90s °F (low 30s °C) in the late spring through early fall.
- Dissolved oxygen (DO) concentrations ranging from zero mg/L at the mudline to super-saturated during daylight hours in spring to fall.

Section D.3.6 Fish Stocking in Ponds - Tilapia, page D-10, 3rd full paragraph

Tilapia satisfy the entire suite of attributes sought in a candidate species, more than any other single species being considered for the SCH Project (DFG 2011). This family of fishes has wide tolerances for water quality conditions, flexible diet including algae and invertebrates, high fecundity, and distribution throughout the water column. Furthermore, they could also support sport fishing. This species is highly tolerant of a wide range of salinities, including high salinities, as demonstrated by their current dominance

in the hypersaline Salton Sea. Juvenile Mozambique hybrids can be slowly acclimated up to 95 grams per liter and survive at least for 5 days if the temperature is kept constant at 73 to 77°F (23 to 25°C) (Sardella et al. 2004a). Tilapia are less capable of dealing with high salinity under extreme temperatures (Sardella et al. 2004b). The preferred temperature range for optimum tilapia growth is 82° to 86°F (28 to 30°C). Growth diminishes significantly at temperatures below 68°F (20°C) and death would occur below 50°F (10°C) (Rakocy and McGinty 1998). At temperatures below 54°F (12°C), tilapia are more vulnerable to infections by bacteria, fungi, and parasites. The temperature regime in the SCH ponds would be expected to be more extreme than that of the current lake (DWR and DFG 2007). Models of water temperatures for the SCH ponds predict temperatures below the ~~lethal tolerance threshold~~ threshold for Mozambique hybrid tilapia (Appendix J). The impacts of cold are affected by salinity and the duration of cold spells. Tilapia can survive brief cold snaps of a day or so (personal communication, K. Fitzsimons 2010). Cold spells could kill some fish, but other fish would survive to recolonize the pond.

Section D.3.6 Fish Stocking in Ponds - Tilapia, page D-11, 4th full paragraph

The relative tolerances of these species to combinations of salinities (20 ppt, 45 ppt, and 60 ppt) and temperatures (cold 11-16°C [52-61-°F]), warm 23-28°C [73-82-°F], and hot 33-38°C [91-100°F]) were tested experimentally (Lorenzi and Schlenk 2011, ~~in preparation~~). The fish tolerance study (Lorenzi and Schlenk 2011) looked at survival over a longer time period (30 days), rather than single cold snap, using an expected winter temperature range with typical diurnal flux (11-16°C, based on field measurements and modeling data). The tested fish included Mozambique tilapia (two strains: wild fish from Salton Sea and an aquaculture strain from a local fish farm), fish from a blue tilapia assemblage in the New River, and redbelly tilapia from the New River. The temperature-salinity tolerance study found very good survival at 11-16°C and 20 ppt salinity for wild Mozambique tilapia (100 percent), hatchery Mozambique tilapia (67 percent), and blue tilapia (80 percent). The best survival at cold temperatures was observed with the wild Mozambique tilapia, while the aquacultural strain of Mozambique tilapia was the best performer overall for all salinities at warm temperatures. The blue tilapia strain surprisingly did not have better survival than Mozambique tilapia in cold conditions. Redbelly tilapia results were equivocal, due to other sources of mortality in captivity. While most strains and species had moderately good survival in 45 ppt and 60 ppt conditions at warm temperatures, all species showed poor survival in hot high-salinity (60 ppt) conditions.

Section D.3.6 Fish Stocking in Ponds - Desert Pupfish, page D-11, 5th full paragraph

Desert pupfish are listed as an endangered species under both Federal and California Endangered Species Acts. They currently inhabit the agricultural drains and creeks that feed into the Salton Sea, shallow areas of the Sea itself, and numerous created refuge habitats. A study of IID agricultural drains found an abundance of desert pupfish positively correlated with western mosquitofish, but negatively correlated with salfin molly, and Mozambique hybrid tilapia (Martin and Saiki 2005). Desert pupfish are observed most frequently in shallow water less than about 1 foot (30 centimeters) deep with velocities less than about 1 foot/second (Black 1980). They are capable of moving freely between the relatively fresh water in the agricultural drains and the highly saline environment in the Salton Sea (DWR and DFG 2007).

Section D.3.6 Fish Stocking in Ponds – Filling and Stocking of SCH Ponds, page D-13, 3rd full paragraph

Several species and strains of tilapia are present in the waters of the Salton Sea drainage, and each requires a different approach for securing sufficiently large numbers of founders. Mozambique hybrid tilapia are currently abundant in the Salton Sea and large numbers could easily be captured for stocking into SCH ponds. However, their long-term availability is tenuous with the increasing salinity in the Sea. The same fish is available from local aquacultural facilities, but may not perform as well as wild caught fish, given the selection pressure on the wild population that would likely result in greater tolerance of the

Sea's salinity and temperature range (Lorenzi and Schlenk 2011, in preparation). Redbelly tilapia are abundant in drains at the Sea's northern end, particularly those filled by tilewater. These populations should persist, due to the consistency of water quality in those drains, and fish would be available for seining/trapping for SCH ponds in the future. Finally, tilapia resembling blue tilapia are present in the rivers, agricultural drains, and Brawley Wetlands.

Section D.4 Possible Operational Scenarios, page D-15, 2nd paragraph

Water Quality Tolerances of Target Fish – The fish species used in the ponds would have to survive and reproduce given the expected water quality conditions, both managed (salinity) and uncontrolled (air temperature, wind mixing, DO) conditions. Tilapia appear to meet many of the requirements for a productive, sustainable fishery resource for piscivorous birds. For some tilapia species or strains, cold tolerance (below 13°C [55°F]) is impaired at higher salinities (Lorenzi and Schlenk 2011, in preparation). Hydrological modeling suggests that water temperatures could drop below 11-13°C (52-55°F) during December through February. DO concentrations could dip below tilapia minimum tolerances. Nutrient concentrations are high in the New and Alamo rivers, due to contributions from agricultural runoff. Water quality modeling suggests high levels of algal growth are possible, along with oxygen deprivation problems that accompany hot weather algal blooms (B. Barry and M. Anderson, University of California Riverside, unpublished data). Also, seasonal anoxia could be more frequent and prolonged in spring (March through May) and fall (October) due to algal blooms.

APPENDIX I SELENIUM MANAGEMENT STRATEGIES

Section I.3.1 Ecological Receptors and Exposure Pathways – California Brown Pelican, page I-12, lines 25-27

The California brown pelican occurs at the Salton Sea as ~~newly fledged young~~immature and post-breeding adults as they disperse from nesting areas in Baja California (Patton et al. 2003). During summer, brown pelicans forage around the Sea's margin. Since the mid-1990s, single day counts have reached 2,000 individuals (Shuford et al. 2000) and probably exceed 3,000 (Patten et al. 2003). Peak numbers of brown pelicans detected during surveys in 2005 and 2006 were over 5,000 birds (DWR and DFG 2007). ~~In recent years~~the past, brown pelicans have nested in small numbers, especially at the Sea's southern end at the mouth of the Alamo River (Molina and Sturm 2004). In 2009, California brown pelicans were most abundant in August with almost 3,000 individuals recorded near and within the Project area; numbers declined in the fall but the species remained a consistent visitor throughout the year (USFWS 2010). This species was observed during Summer 2010 surveys foraging within the Sea at the mouths of the New and Alamo rivers and along the shoreline (Dudek 2010); suitable roosting and loafing habitat includes sandbars, islands, and rocky areas within the Project area.

Section I.3.4 Conclusions, page I-19, lines 7-9

The modeling results yield several findings with relevance to SCH design and operation. First, the selenium risk in SCH ponds supplied with Alamo River water would likely be substantially higher than in ponds utilizing New River water. Risk characterization indices suggest moderate to high risk for reduced egg viability in black-necked stilts would occur in Alamo River-supplied SCH ponds and that the risks would be elevated above current risk levels (Sickman et al. 2011). Second, inverse modeling supports the premise that higher salinity levels would result in lower risk from selenium (due to using less river water in the blended water supply). ~~Blended water of~~with Ssalinity of 35 ppt is recommended to reduce risk of reproductive effects (<6 µg/g dw). If low to moderate levels of reduced hatching success are deemed acceptable, then blended water with salinity levels closer to 20 ppt would be adequate for New River-supplied SCH ponds.

Section I.4.1 Source Control and Minimization – Prevent Wildlife Access to Sedimentation Basins, page I-20, line 37

The first pond where sediment would settle out is likely to have the highest concentrations of selenium, due in part to physical transport into the ponds of selenium in water and on sediment and particulate matter. In addition, as seen at the SHP ponds, selenium concentrations can be higher in the first pond due higher primary productivity and selenium uptake by primary producers in the lower salinity conditions (Miles et al. 2009). For the SCH Project, this location would be the sedimentation basin where river water is first diverted. Therefore, the sedimentation basin would be constructed and maintained to be deep with steep sides to discourage foraging and nesting by birds such as black-necked stilts. If necessary, other bird deterrent methods (e.g., Gorenzel and Salmon 2008) would be considered if selenium concentrations in the basins are at levels of concern and bird use is high.

**APPENDIX J SUMMARY OF SPECIAL STUDIES SUPPORTING THE EIS/EIR
IMPACT ANALYSIS**

Section J.3.2 Approach and Results, page J-7, line 39

Blending Sea and river water is the only feasible means to achieve the desired salinity range (20-40 ppt) across all ponds. Evaporation would increase salinity over time, depending on mean depth (indicative of water volume) and residence time. With an inflow salinity of 20 ppt and hydraulic residence time of 60 days, the resulting pond salinity would be 30 ppt in a 0.5-m-deep pond and 23 ppt in a 1.5-m-deep pond. However, relying solely on evapoconcentration of river water (2 ppt) would never achieve target salinities, and would increase selenium loading to ponds because water selenium concentrations are greater in the rivers than the Salton Sea. Cold temperatures less than (10°C) are periodic events of short duration (hours). Modeling by UCR of proposed SCH designs suggested that events lasting more than 12 hours would occur about five times over a 3-year modeled period (Barry and Anderson, unpublished data). Conditions when anoxia would likely occur were during periods of algal blooms in spring and fall (Appendix J, page J-8, lines 1-8). This is not unexpected given the high nutrient levels and eutrophic conditions of the Salton Sea, Alamo River, and New River.

Section J.3.2 Approach and Results, page J-7, lines 41-45

The water quality modeling provided one-dimensional vertical profiles of temperature and DO, hourly over a ~~three~~3-year simulation period. Temperature profiles were very similar across scenarios. Water temperatures would periodically drop below tilapia tolerances (11-13°C [52-55°F]) during December through February. Thermal stratification occurred in ponds with smaller surface area (200 acres), which have less fetch and therefore less wind mixing, than larger pond areas. Deeper ponds (1.5 m mean depth) would experience stratification more frequently than shallower ponds (0.76 m mean depth). Modeling found that most cold events were short duration (a few hours). Cold events longer than 12 hours occurred five times over the 3-year modeling period. Cold events would be expected to reduce fish numbers, but not eliminate the population.

Section J.3.3 Application to SCH Project, page J-8, lines 20-25

The models, as limited as they are, confirmed assumptions that a productive aquatic system could be developed that would include fish for birds. This exercise proved useful to look for trends and periods of concern. Stressful conditions would occur periodically. Water temperatures would be too cold for tilapia ~~to tolerate~~ for periods (hours) during December to February. Anoxia would occur near the bottom and occasionally complete anoxia through the water column when phytoplankton blooms occur in spring and fall. Stratification would maintain a layer of oxygenated water near the surface. Bottom anoxia is more of a concern for benthic invertebrates than for tilapia, which can tolerate conditions of 1 µg/L DO and can

move upwards to oxygenated water near the surface. This one-dimensional water quality model does not capture spatial heterogeneity and microhabitats. It is plausible to expect that areas near the surface or in different areas of the pond could have different localized water quality conditions. Model results have guided development of the proposed operations and have focused the number of operational scenarios to be validated in the proof-of-concept phase (Appendix D).

Section J.4.1 Purpose and Need, page J-8, line 35

The fish species that would be stocked in the ponds would have to survive and reproduce given the expected water quality conditions, both managed (salinity) and uncontrolled (air temperature, wind mixing, dissolved oxygen). Tilapia appear to meet many of the requirements for a productive, sustainable fishery resource for piscivorous birds (DFG 2011). Tilapia are currently in the Salton Sea, are an important forage species for birds, and have impressively wide tolerances for salinity (currently persisting in the Sea at 53 ppt) and low dissolved oxygen. Their main drawback, other than potential competition with desert pupfish, is whether they could handle the lowest water temperatures predicted for SCH ponds. The preferred temperature range for optimum tilapia growth is 82° to 86°F (28 to 30°C). Growth diminishes significantly at temperatures below 68°F (20°C), and death would occur below 50°F (10°C) (Rakocy and McGinty 1998). At temperatures below 54°F (12°C), tilapia are more vulnerable to infections by bacteria, fungi, and parasites. Tilapia are vulnerable to cold temperatures below 10°C, but the impacts are affected by salinity and the duration of the cold spell. Tilapia can survive brief cold snaps of a day or so (personal communication, K. Fitzsimons 2010). The fish tolerance study looked at survival over a longer time period (30 days), rather than single cold snap, using an expected winter temperature range with typical diurnal flux (11 -to 16°C, based on field measurements and modeling data). While the SCH ponds could be operated to adjust salinity (proposed range 20-40 ppt, Appendix D), it will be difficult if not impossible to control water temperatures that naturally fluctuate widely in this desert climate.

This laboratory experiment by Dan Schlenk and Varenka Lorenzi of UCR tested the survival tolerances of different tilapia species exposed to various combinations of salinity and temperature in order to inform design of operational scenarios and selection of fish species for stocking (Lorenzi and Schlenk 2011).

Section J.4.2 Approach and Results, page J-9, lines 9-17

The tested fish included Mozambique hybrid tilapia (two strains: wild fish from Salton Sea and an aquaculture strain from a local fish farm), fish from a blue tilapia assemblage in the New River (“New River blue tilapia”), and redbelly tilapia collected from an agricultural drain at the northeast Salton Sea (Lorenzi and Schlenk ~~in preparation~~ 2011). Juvenile fish were collected, acclimated in the lab, and then exposed to different combinations of salinity and temperature. The three salinity concentrations (20, 45, and 60 ppt) were obtained by blending water from the Salton Sea and New River, similar to the approach that would be used to operate the SCH ponds. The three temperature regimes mimicked daily fluctuation of 5 degrees Celsius (°C): cold 11-16°C (52-61 degrees Fahrenheit [°F]), warm 23-28°C (73-82 °F), and hot 33-38°C (91-100°F). These temperature regimes were based on field measurements at the Saline Habitat Ponds, and hydrologic modeling extrapolated to conditions of the SCH Project (1 meter) (Barry 2009, as cited in Lorenzi and Schlenk 2011). After an acclimation period, survival and condition of fish was tested over a 30-day period.

When maintained at 20 ppt salinity, the New River blue tilapia had the best overall survival across all temperature regimes (80 percent survival at cold, 40 percent at warm, and 27 percent at hot) (Lorenzi and Schlenk ~~in preparation~~ 2011). Redbelly tilapia survival was very poor in the lab, but this likely was due to other stressful conditions in captivity, namely aggression. It does not appear appropriate to draw conclusions about this species’ thermal and salinity tolerances from such data. While most strains and species had moderately good survival in 45 ppt and 60 ppt conditions at warm temperatures, all species showed poor survival in hot high-salinity (60 ppt) conditions.

Section J.4.3 Application to SCH Project, page J-11, added before paragraph 1

Tilapia are vulnerable to cold temperatures below 10°C, but the impacts are affected by salinity and the duration of cold spells. Tilapia can survive brief cold snaps of a day or so (personal communication, K. Fitzsimons 2010). The fish tolerance study looked at survival over a longer time period (30 days), rather than a single cold snap, using an expected winter temperature range with a typical diurnal flux (11 to 16°C, based on field measurements and modeling data). The temperature-salinity tolerance study found very good survival at 11 to 16°C and 20 ppt salinity for wild California Mozambique tilapia (100 percent), hatchery California Mozambique tilapia (67 percent) and blue tilapia (80 percent). Cold spells could kill some fish, but other fish would survive to recolonize the pond.